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Original Articles.

INFLAMMATION ABOUT THE CAPUT COLI.*

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It is with some hesitation that I have selected a title of so general a character for the paper which I have the honor of presenting to this Society. It has come to pass in the case of inflammation in the vicinity of the colon that most of our writers are attributing all of the inflammatory affections in this region to pathological conditions of the appendix. The reason for this is not far to seek. Most of the recent work that has been done upon this subject has been done by operating surgeons, especially those of abdominal tendencies. These operators are necessarily brought in contact with the more serious cases of inflammation about the caput coli, *i. e.*, those in which pus has either formed or will inevitably do so within a short time, and it must be confessed that in these cases the appendix is most often at fault. The general practitioner comes in contact with both classes of cases, those in which the operation is required, and those in which recovery occurs without surgical intervention. The surgeon—who is most frequently called in only when an operation is inevitable—necessarily looks upon the subject with an

operative bias, and is apt to say without qualification, that all cases of inflammation about the caput coli require operation. If, on the other hand, the general practitioner has a run of cases in which recoveries without operation preponderate, which is very often the case, he is apt to assume an ultra-conservative position. I have heard surgeons support the operative treatment in most radical terms of these cases without the least qualification or the slightest attempt at differentiation of cases and conditions. On the other hand, I have heard practitioners of experience assert that operation is never indicated, and that conservative treatment should be adopted as a matter of routine. For example, I heard a practitioner of many years' experience, state at an important society meeting, that the free administration of opium and the faithful application of hot poultices was the only treatment which was warrantable in cases of this kind. In support of this position, he stated that his father before him had treated such cases in a similar manner and with success, and that he hoped that this son, who was to follow him in his practice, would also treat them in that way. It was rather painful to note this addition to the list of hereditary fatalities, and it would, I presume, have been a hopeless task to convince this old gentleman that certain cases of peritonitis of a fatal character, which had occurred in his practice, were due to undiscovered or neglected perityphlitic abscesses.

With regard to the statistics compiled with a view of determining the relative value of conservative and operative measures, it is probable that we will always experience extreme difficulty in forming a positive opinion. The surgeon reports a long list of cases, showing the brilliant successes attendant upon operative measures, without the least attempt at

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discrimination as regards the relative gravity of his cases. Not all surgeons are open to criticism in this respect, it is true, but unfortunately we are compelled to rely for our statistics, not upon the cases of a few experts, but upon the cases of a large number of practitioners, many of whom may be classed as the average surgeon, whose opportunities for the post-mortem verification of diagnosis and for the comparison of a large number of cases are rather limited. Some reports are based mainly on cases of operation, the gravity of which is no greater—as far as the operation, *per se* is concerned—than that of opening an ordinary abscess. Other reports are based upon cases requiring active interference with the caput coli and resection of the appendix. In other instances, the surgeon is not appealed to until rupture and infection of the general peritoneal cavity has occurred. Necessarily there is in such cases a very meagre prospect of cure by operation, yet such cases are accredited—and I think unfairly—to the sum-total of operations for perityphlitic abscess, or appendicitis, if you please. I think that the necessity for a careful differentiation of cases in order to enable us to come to a rational conclusion as to the comparative value of radical or conservative measures is at once apparent. I believe, moreover, that the conservative practitioner and the abdominal surgeon should not work on parallel lines, as seems to be the tendency, but upon those which converge to logical conclusions of the advisability of occupying a middle ground in the controversy. The surgeon is a potential force for the accomplishment of greatly-needed work in cases of inflammation about the caput coli. He often, however, is more efficient for good when he brings the experience of the level-headed, conservative, general clinician to his assistance. A series of successful conservative cases under conservative measures by no means proves that a routine conservatism is best in such cases, neither does an occasional case dying without operation, when every expert surgeon knows that an operation may have saved life, prove that operation is indicated.

Nowhere has modern surgery been characterized by more signal triumphs than in the pathological study, diagnosis and treatment of inflammation about the

head of the colon. This great advance in our knowledge and surgical resources is to be attributed to the arduous labors of American physicians and surgeons, among whom Sands, Weir, Morton, Hoffman, Fitz, Pepper, McBurney, Dennis, and Stimson are especially prominent. The papers of Dr. McMurtry, of Louisville, and Drs. Murphy and Lee, of Chicago, have been important contributions to this subject,

It was long believed that inflammation of the cellular tissue about the colon was the main factor in perityphlitic inflammation. Modern pathologists and abdominal surgeons have disapproved this theory as far as its general applicability is concerned, and have attempted to show that a diseased appendix is the *fons origo et mali* in practically all of these cases, abjuring the cellular tissue altogether and seeming to believe that by some peculiar dispensation of Providence, cellular tissue in this location is protected from those causes of inflammation and suppuration which are potent elsewhere. This, it would appear, is an extreme view and one which bids fair to work sad havoc with the luckless appendix. It has even been facetiously suggested that the only salvation for the human race is a prophylactic excision of the appendix as soon after birth as practicable. Whether this would result some generations hence in an appendixless type or man is a question, but if rats may be bred without tails, I suppose such a result will not be too visionary for consideration if the present furor of excitement over the appendix keeps up. Like Davy Crockett after the coon, when the enthusiastic surgeon starts after the appendix he is bound to get it. It remains to be seen what he will do when the appendix becomes obsolete. Much as we may deplore surgical radicalism, the female ovary has had much to be thankful for since the attention of the abdominal surgeon has been directed to the appendix.

Regarding the relation of the cellular tissue to abscesses about the colon, while it is undoubtedly true that in the majority of cases it bears the same relation to inflammation, and perhaps perforation, of the appendix that so-called pelvic cellulitis bears to pathological conditions affecting the uterine appendages, and is of a purely secondary nature, it should, I think, be assigned a little more important rôle than

most abdominal surgeons believe. It would certainly seem to be true that in many cases of perityphlitic inflammation, involvement of Velpeau's membrane—the extra-peritoneal cellular tissue—has much to do with the peculiarities of the resulting abscess. A point which seems to me of some importance and which was brought out in a very positive manner by my friend Dr. McMurtry, of Louisville, in a paper before the Southern Surgical and Gynecological Association in 1891, is the arbitrary assertion that the inflammatory process and resulting abscess in cases of inflammation about the caput coli are always intra-peritoneal. This assertion is based upon the recent anatomical dissections of Treves, Bull, and others, which seem to show that the appendix and cæcum are wholly within the peritoneal cavity. It has also been shown by such operators as McBurney and others, that the abscesses are usually intra-peritoneal. This assertion requires qualification, for general practitioners will very often allow a perityphlitic abscess to rupture spontaneously, either externally—which happy event occasionally occurs—into the cæcum, or, with an almost inevitably fatal result, into the peritoneal cavity, because of the horror which men of small experience in abdominal operations have of the peritoneum. In other cases the abscess will be allowed to burrow in various directions to appear at some point far distant from the original focus of suppuration. These disagreeable results are permitted in the face of the fact that a simple incision into what is practically an ordinary abscess would prevent them. A pointing perityphlitic abscess—intra-peritoneal though it may be—is practically extra-peritoneal because if the barrier of lymph, young connective tissue, and agglutinated intestine that shuts it off from the general peritoneal cavity. This point I believe to be of paramount importance. In some cases it would appear that the inflammation may agglutinate the peritoneum about the appendix, and form an abscess of small size which perforates through the retro-peritoneal cellular tissue. This appears to me to be the explanation of the tardiness with which some abscesses in this location come to the surface. Instead of the induration being at once manifest it may be some days or weeks before it can be detected with any degree

of positiveness. The abscess meanwhile burrows along the planes of cellular tissue in the iliac fossa to the ileo-lumbar region and may appear at some distance from the head of the colon, or may gradually burrow outward toward the loin and downward and upward in the direction of the groin until at one or both points it becomes perceptible to the touch. In several cases in which I have operated, I have every reason to believe from the conditions present that the process was extra-peritoneal, and that the abscess had burrowed up in the direction of the kidney as well as downward into the iliac fossa. The point which I wish to emphasize is that even though these abscesses be considered *ab initio* intra-peritoneal, the operator must not lose sight of the fact that in some cases he can do what is practically an extra-peritoneal operation, for there is at least a barrier produced by adhesions which shut off the collection of pus from the general abdominal cavity.

In view of the prominence which inflammation, gangrene and perforation of the appendix has been accorded in the etiology of suppurative processes about the caput coli, it may seem rather bold to express a belief in the occurrence of such inflammatory troubles without such serious disease of the appendix. It must be admitted that such cases very often get along very well without operation, and perhaps do not even suppurate, but this should be accepted as at least a partial explanation of the arbitrary position of the surgeon. The cases in which serious disease of the appendix exists must come to suppuration and should, as a rule, be operated upon, while in many of those in which the appendix is not involved to a serious extent, conservative measures may succeed with the result that the surgeon has no opportunity of examining the case. I think that general practitioners of experience will be inclined to recognize cases of inflammation about the colon which do not begin in the appendix *per se*, but have for their starting-point inflammation in the colon proper. I can see no reason why this inflammation may not extend to the cellular tissue outside of the colon without there being necessarily any perforation or even any suppuration. This extension of inflammation, I believe, does occur and in all likelihood is the result of infection. A comparative study of the bacterium coli com-

mune and pyogenic microbes may in the future shed some light upon the subject. The close similarity or, as is claimed by some, identity of the two forms of microbe is suggestive to say the least. Whether inflammatory conditions in and about the appendix and colon may give rise to evolutionary changes in the bacterium *coli commune* by which it acquires properties of infection and pyogenesis, is at least an open question, and one upon which the bacteriologist is alone competent to pass an opinion.

The relation of foreign bodies to appendicitis and the pathological processes secondary thereto, might be considered to be quite definitely settled were it not for the fact that every now and then contributions to medical literature appear in which foreign bodies are assigned a very unimportant place in the etiology of the disease. Within a year I heard a prominent abdominal surgeon state, that in his opinion foreign bodies were very rarely the cause of perforation of the appendix with resulting abscess, he citing a number of cases in which he had evacuated large abscesses in this situation and had removed the appendix, and had not been able to detect a foreign body of any kind. I was not convinced on listening to this gentleman's description of the cases that they conclusively proved that foreign bodies were not present even in them. A foreign body of very small proportions is doubtless sufficient to cause appendicitis and it is conceivable that the finer fruit seeds and even foreign bodies of a large size might easily be overlooked in the cavity of the abscess or the pus which discharges therefrom. A foreign body is, as is well known, not necessarily of extraneous origin. It is probable that in some cases of appendicitis a catarrhal colitis is the point of departure for the pathological process. Obstinate constipation may lead to a catarrh of the colon, which process extends to the appendix with a resulting slight swelling of the appendico-cæcal opening. The resulting formation of a faecal stone is so well known that I would not repeat it were it not necessary to a complete presentation of the subject. Mucus collects in the appendix, a small amount of faecal matter gets into the tube during straining at stool, and fails to get out again, and forms in combination with the mucus a small faecal stone. Sometimes this faecal stone is formed in the cæcum and is forced

into the appendix, although it is probably most often formed in the appendix proper. A practical point in this connection, to which I believe attention has not been called, or at least if so, it has not been brought to my attention, is that in certain cases of inactivity of the colon with resulting constipation and catarrhal colitis, abdominal massage, which is so frequently recommended and which is so often beneficial in constipation, is apt to be a source of danger. A small portion of faecal matter may be forced through the partially stenosed appendico-cæcal opening, and once imprisoned in the appendix it will become as truly a foreign body as though it were of extraneous origin. The faecal stone may set up a varying degree of inflammation of the appendix according to the degree of distension of the little tube. Frequently, as is well known, it perforates and produces inflammation and suppuration about the head of the colon. It is probable that in some cases the faecal stone dissolves in the resulting pus formation, and this would seem to be the explanation of many of those cases in which perforative ulceration of the appendix is found and yet no foreign body is discernible in the pus sac. It is not impossible that in every case where perforation occurs there has been a foreign body of some kind. Many cases of appendicitis remain catarrhal, and may cause little or no disturbance of the patient's health. The frequency of this condition is well shown by Fitz in his analysis of 72 cases in which appendicitis was probably not suspected during life.

With regard to the dependence of appendicitis upon foreign bodies, a very interesting case was reported by my friend, Dr. C. A. L. Reed, of Cincinnati, in the Transactions of the Southern Surgical and Gynecological Association for 1890. He was called to see a fine, stalwart woman, who had been troubled with constipation for the relief of which she had taken a regular diet of compound cathartic pills. She had suffered for two weeks with inflammation about the caput coli, the diagnosis of which was indisputable. Laparotomy disclosed a very large pus cavity; this was opened and irrigated; the appendix had disappeared, and in the cavity of the abscess were found half a dozen of the compound cathartic pills. While I am speaking of the relation of foreign bodies

to appendicitis, some members of this society are doubtless recalling cases, either personal or reported in the journals, in which perforation, gangrene, and perhaps spontaneous amputation of the appendix has occurred, yet no foreign body has been discoverable. It might not be amiss in this connection to again suggest the readiness with which a foreign body may be overlooked and the possibility of a faecal stone dissolving in the resulting pus. No one has yet made clear the reason for such an intense inflammation affecting a structure anatomically and functionally so unimportant as the appendix vermiformis. Leaving out of consideration some special type of infection or the impaction of foreign bodies, such pathological processes, to say the least, are difficult of explanation.

Causes.—The causes of inflammation in and about the head of the colon may be summed up as: (1) Faecal impaction. (2) Faecal stone. (3) Extension of catarrhal colitis with occlusion of the mouth of the appendix. (4) Foreign bodies of extraneous origin. (5) A possible primary infection of the appendix and the tissues about it by pus microbes. (6) Traumatism. The latter cause may be disputed, but I have observed one case in which it appeared to be the starting-point of the disease. It is not difficult to appreciate the possible importance of traumatism. A blow upon the abdomen over the distended colon might, it seems to me, give rise to a bruising of the colon with resulting inflammation, which may extend to the appendix and the retro-peritoneal cellular tissue, or may cause extrusion of faecal matter into the appendix with resulting faecal stone and its sequelæ. The relation of faecal impaction in the colon to perityphlitic abscess is possibly more important than is generally believed. In two cases of my own in which an abscess resulted, and in which I performed an operation, there had been no constipation before or during the patient's illness, yet some days after the operation a large faecal mass descended into the rectum, and I was compelled to remove it in each instance by mechanical means. As the patient had been having a stool daily under the use of salines, the most likely point at which this faecal mass could have formed was the caput coli. I can appreciate the possible objection that the impaction was the re-

sult rather than the cause of the inflammation. It is a noteworthy point that perforation of the appendix results so often in a limited inflammation, while perforation of the stomach is immediately and almost inevitably followed by a fulminant peritonitis. Mynter explains this, by the more active peristalsis of the stomach and small intestine, which results in a more speedy and liberal distribution of the infective matter over the peritoneum. The comparatively small calibre of the appendix and the slight *vis-a-tergo* imparted by the small quantity of faecal matter in its lumen, constitute a more logical explanation. Both factors are probably operative.

Experience at the bedside and autopsy table, has permitted of a tolerably definite classification of appendical inflammations. One of the best classification is that of With, of Copenhagen, which is as follows: 1. Peritonitis appendicularis adhæsiva; 2. Peritonitis appendicularis localis; 3. Peritonitis appendicularis universalis.

Diagnosis.—The diagnosis of perityphlitic abscess is confessedly not always easy, as it is shown in one of my own cases in which I stood ready to operate, the symptoms pointing clearly to the existence of pus, and the fullness of the ileo-caecal region and tenderness at that point seeming to warrant an operation. In this case the patient recovered after the passage of a large amount of faeces. Fitz reports a case of circumscribed peritonitis in the right iliac region diagnosed as appendicitis, which was afterward proven to be on autopsy abscess of the liver due to catarrhal colitis. In a second case, diagnosed as appendicitis, the post-mortem disclosed a suppurating sub-peritoneal gland, due to gonorrhæal infection. In a third case pyosalpinx was mistaken for appendicitis. In a case of my own, appendicitis existed with a small abscess, but all of the symptoms which existed prior to the operation have persisted for a long time, and were due in all probability to spinal irritation. This case was not operated on by me, but was under my care some months after the operation, and finally drifted into Dr. Senn's hands, and was, I understand, cured by spinal counter-irritation. A valuable point in diagnosis in obscure cases is the fact, that when an abscess, forming about the caput coli, tends to burrow upward toward the kidney, there will be

marked irritation of the psoas muscle, marked flexion of the thigh, crural neuralgia, and great pain on attempts at straightening the limb. Dr. McMurtry, in his excellent paper already alluded to gives this as one of the typical signs of appendicitis, but I have not observed it as a prominent symptom excepting in cases in which the abscess had had a tendency to burrow in the direction indicated. In these cases the diagnosis was not positively made early in the case, and this symptom came on only after the abscess had in all probability opened into the retro-cæcal cellular tissue and developed a secondary pus sac in that situation.

One of the things that the general practitioner is likely to do when he discovers an induration characteristic of perityphlitic inflammation, is to plunge the needle of an aspirator or hypodermic syringe into the mass. I never could understand why the practitioner should do this, for as a rule he does not intend to operate when he finds pus, and the inspection of a few drops of stinking pus is not likely to give very much assistance in a diagnosis which is already clear. If the pus has not formed, the induration not only does not require aspiration, but there is danger of infecting the peritoneum by the needle. If pus has formed, aspiration does no good, and there is still greater danger of infection. Very often the aspirator is relied upon as the crucial test for the diagnosis and an operation is decided against because pus is not withdrawn by the needle. As a matter of fact, however, it is difficult to get at the pus with a needle excepting in those cases in which the abscess has fortunately come forward in the direction of the anterior abdominal wall. Even in these cases, if the anterior peritoneum is not agglutinated to the abscess sac, the introduction and withdrawal of the needle may be followed by infection of the general peritoneal cavity, septic peritonitis, and death. Aspiration then, may be set down as on the average dangerous and about as logical as the performance of the ostrich who seeks safety by sticking his head in the sand. If the practitioner is not secure in his diagnosis, and is not capable of doing abdominal work, he should not be deluded into a show of industry by the facility with which he can jab a needle into the induration in the iliac fossa. Are there any circumstances under which aspiration

might be advisable? When the pus has come well forward and the abdominal tissues are involved in the agglutinating process of the abscess walls, and it is necessary to convince the patient or the physician in charge of the necessity of an operation by an impression upon the ocular or olfactory apparatus of the doubting Thomas, aspiration may be prayerfully considered.

One of the most important points in connection with appendicitis is that many cases of so-called idiopathic peritonitis are dependent upon a fulminant attack of appendicitis which spreads so rapidly to the general peritoneum that acute peritonitis occurs and masks the primary trouble in the right iliac region. It is probable that in many children who are said to have idiopathic peritonitis there has really occurred primarily, inflammations about the appendix. In children, however, the inflammation may extend to the sensitive peritoneum so rapidly that a fulminant peritonitis results and destroys the little patient's life long before the period of pus formation, while in the adult suppuration and a distinct tumor will be observed. The more carefully these cases of peritonitis are studied, the narrower the range of idiopathic peritonitis becomes. Appendicitis and traumatism are often at the bottom of so-called idiopathic peritonitis. One of the cases which I shall shortly relate was probably an illustration of the rapidity with which the inflammatory process in the appendix will extend to the general peritoneum. Many times perhaps, general peritonitis has been preceded for some time by inflammation of the appendix of a low grade, the symptoms of which have not been sufficiently prominent to attract attention. Suddenly, however, gangrene or perforation occurs with resulting infection of the general peritoneum, and within a few hours the patient is in the agonies of what is labeled "Idiopathic Peritonitis."

Should the mortality rate reported from operations for perityphlitic abscess be an arbitrary guide in deciding the question of the advisability of an operation? It would seem not. Each case should be judged upon its own merits and an occasional error in judgment should not condemn conservatism on the one hand, or operation on the other. Operation for the results of appendicitis

necessarily varies in its gravity with the condition present. Thus it may be (1) surgically extra-peritoneal, albeit it may be anatomically intra-peritoneal. (2) Intra-peritoneal, the condition being nothing more nor less than a septic peritonitis, the operation perhaps being performed when the patient is in a desperately bad condition. (3) The appendix may require resection. (4) The operation may be no more formidable than the evacuation of an ordinary abscess, the latter being the kind of cases in which some operators have achieved their greatest glory. (5) The appendix may be removed in the interval between the attacks of recurrent appendicitis. Obviously the mortality rate will vary greatly in these conditions. The mortality of appendicitis, as recorded up to date, is extremely severe. Fitz, who has reported more cases than any other writer, states that 74 per cent. of cases have recovered and 26 per cent. have died, about one half of these cases being treated medically and the other half surgically. As McMurtry remarks, "this indicated that those treated surgically were operated upon late in the disease," which may have meant that the patients were practically moribund. The late operation has had the enormous mortality of 50 per cent.

It is not my intention to expatiate upon the treatment of inflammation about the caput coli. There are some points, however, that will bear mention. It is probable that the tendency in such cases is to overdose with opium, while perhaps the objections which apply to the use of opium in general peritonitis do not apply so pertinently to the localized inflammation under consideration, it should, at the same time, be used with extreme caution. Should pain be severe morphia hypodermically in moderate doses may be warrantable, but great care should be taken—especially in administration by the mouth—lest the digestive organs be disturbed and vomiting result, which might prove disastrous to a patient in this condition. As a rule, local applications will accomplish the desired analgesic effects. Piping hot poultices, sprinkled liberally with laudanum, are always in order. An application which has in my hands proved a desirable substitute for the internal administration of opium in abdominal affections of a painful character, is an ointment with

lanoline for a base, to which is added menthol, extract of aconite, belladonna, and extract of opium in considerable strength. Salines in full and frequent doses constitute, it seems to me, the only rational measure of internal medication.

Selection of Cases for Operation.—Wylie has stated that, "should the symptoms of a local peritonitis in the region of the cæcum not begin to improve by the fourth or fifth day from saline treatment and local applications over the seat of the inflammation, an incision should be made down through the muscles and the peritoneum dissected up until a place is found where the abscess is attacked, when it should be opened. While the operation would be less difficult if delayed, the danger of the abscess rupturing and producing acute septic peritonitis must be borne in mind, hence an increased difficulty in doing operation is more than compensated for in the risk saved the patient." McMurtry says: "Operation involves less danger than delay, and should be resorted to in all cases in which the high grade of inflammation is persistent." The essential of the operative technique according to this authority are "brief anaesthesia, quick and thorough work, removal of the appendix, irrigation and drainage." From my limited experience of observation of these cases, I believe that the safest guides are the pulse, temperature, degree of sensitiveness of the region involved, and the rapidity with which the induration occurs. Cases of the fulminant type, such as occurred in one of Chicago's well-known citizens, which was operated upon by Dr. McBurney a short time ago, demand immediate operation, and should be regarded in the light of a septic peritonitis from a surgical standpoint whether general involvement of the peritoneum has begun or not. Many cases will occur in which conservative measures are indicated, but in every such instance the attending physician should call a capable surgeon into the case in order that the operation, if indicated at all, may be done sufficiently early. In cases which are seen after fluctuation has occurred, or when there is no fluctuation but agglutination of the mass to the structures of the abdominal wall, or in any case in which we are reasonably certain that pus has already formed, operation should be performed at once if the purulent collec-

tion is at all accessible. The pus should never be allowed to select its own exit, for while it may burrow in a favorable direction and open spontaneously at a favorable point, we have no assurance that it will do so, and our duty is to make a favorable point for it. A conservatism which permits an abscess in any of the great cavities of the body to knock at all doors in the neighborhood in the attempt to find the point of least resistance with the results oftentimes of escaping at a door which opens into some vital structures or organs of the body, is not the kind of conservatism that is must conducive to our patient's welfare.

As for the appendix, the statement made in Dr. McMurtry's paper, that it should always be removed is probably too arbitrary. Many cases recover after the evacuation of the abscess without removal of the appendix and without subsequent recurrence of the inflammatory process. Cases recover spontaneously by discharge of the pus into the bowel or externally without recurrence of the disease. The question should be decided not in a routine manner, but according to the conditions which the affected part presents. The site of the incision in operations for the relief of appendicitis and its sequelæ has been the source of some discussion, some surgeons advocating a perpendicular incision, others one corresponding to the direction of Poupart's ligament, and still others a combination of both. It would seem that we have here another opportunity for the differentiation of cases. Where there is a palpable tumor its axis is very apt to be in the general direction of Poupart's ligament, and under such circumstances an incision as for the ligation of the external iliac is advisable. Under other circumstances it may be preferable to make a vertical incision over the caput coli or perhaps combine the two incisions, a proceeding which is very apt to be necessary in order to expose and remove the appendix.

In presenting this general survey of inflammations about the caput coli, there has been no attempt at completeness. If I shall have succeeded in stimulating a discussion on the more important practical points—which points have been aptly illustrated by cases in my own moderate experience—I shall have accomplished my object.

Clinical Lectures.

ABDOMINAL GROWTHS.*

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Ladies and Gentlemen: The Patient I bring before you is a woman, twenty-one years of age, servant, unmarried, whose father died of acute alcoholism, and mother and four aunts of phthisis. Her childhood was uneventful; puberty occurred at twelve and menstruation has always been prolonged, lasting seven to ten days; occurs without pain. She has been able to work until her present sickness, which began fifteen weeks ago, when she suffered pain in the lower part of the abdomen, particularly in the hypogastric region. This has been greatly increased by pressure; appetite has been poor. She has been treated during this time for a quite severe bronchial attack attended with a hard, painful cough. I saw her yesterday for the first time in the ward. As I expose the abdomen you will notice that the lower portion of it is a little more prominent. In palpating over the abdomen I have to exercise the greatest care on account of its being so tender. This mass extends to about the level of the umbilicus. It is situated in the central part of the lower abdomen, extending equally distant on either side of the median line, consequently is a symmetrical tumor. Now, it is important to remember in connection with this distension, that there has been a continuance of her menstruation and that during the last few months when this tumor has been increasing in size, the menstrual flow has been excessive, almost hæmorrhagic in character. There is no variation in its occurrence from the normal periods, but the duration is longer. As I make pressure over the lower part of the abdomen, I find it exceedingly tender. The patient is very nervous and consequently contracts her recti muscles. Examining in the ward yesterday I found

*Delivered at the Philadelphia Hospital, October 8th, 1892.

that the finger could be pressed between the mass and the symphysis, and in examination of the vagina, the tumor was apparently continuous with the uterus, forming an angle between the anterior wall and the cervix, showing that the development was in the uterus itself. From what I said to you in the last lecture upon the subject of the diagnosis of abdominal conditions, you will recognize this trouble must come from some disordered condition of the viscera situated in the lower portion of the abdomen. Now, a growth of this kind consequently, might be in the uterus, the tubes, the ovaries, or from malignant disease of the rectum, or of the retroperitoneal pelvic glands. Finding the disease situated in this part of the abdomen, it became a serious question to decide as to which particular organ has been the source of its development, and to arrive at some idea of the subsequent progress of the condition. This knowledge will be of advantage in determining whether interference shall be instituted, and when it should be done.

If the tumor arose from the ovary we would expect to find at this period of this growth that it would be situated lower down in the pelvis; more to one side than in the central position. It would more than likely present a certain sensation of fluctuation or at least elasticity, and not the dense, hard feeling that is presented by the mass now under observation. It is true that we may have solid tumors of the ovary, either fibroma or sarcoma, but such growths would without question be situated lower down in the pelvis and to one side of the uterus. The uterus could be outlined and separated from the growth, unless it was closely attached to it; even in such cases the uterus could be felt upon the tumor, rather than forming a part of it. An ovarian fibroid, and more particularly the sarcoma, is likely to give rise through its pressure upon the pelvic vessels, to accumulation of serum within the pelvis and abdominal cavity; in other words to an ascites. We remember, also, that the ovary may be the seat of a growth known as a dermoid tumor, which from its contents presents a sensation of considerable resistance and may be mistaken in those cases where it is closely attached to the uterus, for a fibroid growth. Where the tumor is closely attached to the uterus, so much so as to be difficult to be separated

from it, we will find it situated to one or other side or posterior, while the mass we have in this case seems to develop more particularly in the anterior wall of the uterus and project in front of the cervix.

The dermoid cysts already mentioned arise from folding in of the epi- and mesoblasts in the embryonic life of the individual, and the presence of these abnormal tissues may result through the slightest irritation, in the development of large tumors. The cysts may occur at any time in life, as I recently removed one quite large in size which involved both ovaries from a girl of eleven years. They are seen also in women as old as seventy. Where these tumors are situated beneath the broad ligament and push it up in front of them, the diagnosis may be extremely difficult to determine between them and tumors situated in the uterus itself. We are only able to determine, by careful observation of the peculiar sensation presented by the tumor and by its situation.

In the patient before us we find the tumor is situated anterior to and projects over the cervix, consequently we are not likely to have an ovarian tumor, or a tumor developing from the broad ligament, as these would assume a different relation to the uterus itself. That it is sometimes exceedingly difficult, to determine ovarian tumors from those involving the uterus is self-evident. In this hospital some years ago I had a patient under my charge, in whom there was a development of a tumor in Douglas' pouch, which had pushed up the uterus and bladder in front of it and in its enlargement had displaced downward and forward the posterior wall of the vagina until it projected, a large surface, from the vulvar orifice, pushing the posterior wall of the vagina with it. In introducing the finger to reach the cervix it had to pass over this mass, which was elastic and not hard. The tumor had pushed the uterus and bladder up to such a degree as to interfere with the evacuation of the latter organ. The posterior wall was rendered so tense that it seemed to be continuous with the uterus and hence diagnosis was made of possible fibroid cystoma. The patient died two days later from pressure upon the pelvic viscera, when an autopsy disclosed that the tumor in the pelvis was an ovarian cyst which had formed extensive adhesions and had developed to considerable size in this situ-

ation. The contents of the ovarian cyst were thick and viscid. It was firmly adherent in the pelvis, and could have been readily emptied through the vagina and the cyst wall thus enucleated without any difficulty to the patient.

A case comes to my mind in the practice of another physician in which the patient had a tumor, with the abdomen symmetrically developed. The tumor had remained in existence about eleven months. During this entire period she had not menstruated. Palpating the abdomen, a sensation of elasticity could be determined without fluctuation. On sight this tumor was so tense as to leave us in doubt whether it might not be a distension of the uterus; this, taken together with the fact that the woman had not menstruated led us in spite of her denial to consider pregnancy as a possibility; but upon exploratory incision, the glistening appearance of the surface of the tumor disclosed that it was undoubtedly ovarian. Even vaginal examination was insufficient to enable us to determine distinctly that the tumor was separate from the uterus. Exploratory incision was made which revealed a glistening surface of the tumor and at once impressed us that we had to deal with one which had originated from the ovary. A trocar was plunged into the tumor without procuring a drop of fluid. The opening was then enlarged and the tumor turned out and proved to be an ovarian tumor and subsequent examination disclosed the fact that it was a tumor made up of an immense number of small cysts, apparently a tumor in which every Graafian follicle had undergone cystic degeneration, and these enlarged follicles contained within the sac formed the tumor itself.

In tumors of malignant character, the relation to the uterus is sometimes so close as to render it possible to determine their character only by exploratory incision. These cases, however, only accidentally come under consideration at this time, for the reason that here the tumor is situated anterior to the uterus, or folds over the cervix, and consequently we must exclude the possibility of it being ovarian, and for the same reason we would eliminate tubal tumors. In tumor of the tube, it is generally elongated as well as enlarged. The history does not present the symptoms of suppuration, hence we narrow down the possibility of the growth in this individual

instance to that of tumor of the uterus, or one which may develop in its immediate proximity. In this respect we should not forget that we have tumors in the retroperitoneal glands which may attain to as large a size as those involving the uterus. Retroperitoneal tumors are rare, but that they do occur, however, I have found in a recent case to my cost. The patient was a woman eighteen years of age. She came into the Jefferson Hospital a short time ago with her abdomen quite largely distended, and with a history of trouble having occurred some nine years ago following an attack of mumps. It was a very natural inference that there had been a metastasis of the mumps to the ovaries and that this patient had developed an ovarian tumor as a result. It was possible the tumor might be one of the dermoid variety. It felt like a dermoid for the reason that sensation of fluctuation was indistinct, one of elasticity rather than fluctuation. But such tumors are found posterior to the uterus, while we find in this patient the posterior fornix is free. The tumor just described was not very movable, which is not surprising in a young woman in whom the muscular structures are firm. Vaginal examination or rectal examination was not made. As I look back over the case from a later history, I do not see where either would have afforded any special advantage in determining the character of the growth. The abdomen was opened with the expectation of removing an ovarian tumor. As soon as the peritoneum was opened the appearance of the tumor—more or less lobulated—led me at once to realize that it was not an ovarian. A trocar was plunged into it, presenting a sensation of fluid within it. It was so elastic that we could not believe that it did not contain fluid, possibly of a thick and viscid character. Not a drop of fluid, however, came through the trocar. The abdominal incision was then enlarged and the tumor drawn out. It was found that it was held down by the peritoneum at the level of the base of the pelvis, the peritoneum projecting over it upon each side. The uterus was attached at its anterior surface and lifted to a considerable extent above its ordinary level. It was drawn out and lengthened as the result of the growth of the mass. The peritoneum was cut through just behind the uterus and the latter very quickly torn

off from the surface of the tumor. Passing the hand behind the uterus it went into the structure of the mass and the upper part of it was torn through; following the uterus down, the inferior mass was enucleated or shelled out, showing a large granular mass. The pelvis was carefully cleaned and packed with iodoform gauze, stitching the peritoneum with the upper part of the sac about it in a way that the discharge could not enter the peritoneal cavity. The patient only survived the operation a fraction of an hour. In this case vaginal examination would have disclosed but little, as there was no way in which we could have told that the tumor was situated posterior to the peritoneum until an exploratory incision was made. Even vaginal examination would have led me to suppose that I had to deal with an ovarian cyst with thick, viscid contents that had developed in the pelvis, had increased in size and through its attachments to the uterus dragged that organ up with it. Such tumors are exceedingly rare.

Vaginal examination in the patient before us discloses the fact that we are able to pass the finger behind the uterus and that the mass is continuous with the cervix posterior and anterior, so we exclude the possibility of this being a retroperitoneal tumor. Now tumors that occur in the uterus you would recognize are those more particularly of the structure of the uterus itself and hence are known as fibroid or myomatous tumors. They are due to some local irritation of tissue in the uterus, which develops more rapidly than the other portions of the uterine structure. The connective tissue becomes thickened until the tumor itself is more or less isolated from the remaining structure of the abdomen, having a distinct capsule. The tumors of the uterus differ somewhat in their histological structure. Thus, we have some in which the tumor attains to large size, is quite elastic, does not give a sensation of resistance and density, in which the structure of the tumor is similar to that of the uterus, consequently they are known as myomata or soft fibroids. Where the tumor is of slower growth it pushes about the connective tissue which forms a capsule from which the tumor can be readily enucleated. These are tumors which have become mature. Fibroid growths may occur singly or more frequently in groups, or a number

of them in the same uterus. They vary in size from a millet seed to those weighing nearly a hundred pounds. Such a tumor as it increases in size is a source of discomfort to the patient, gives rise to organic changes in the structures whose functions are interfered with. A tumor in its early development may be pressed down into the pelvis giving rise in this way through pressure to interference with the action of the bowels and rendering voiding of urine difficult if not impossible. Indeed, many cases are discovered through the effort at emptying the bladder in cases of urinary retention. Tumors of the uterus are also divided according to their situation in the structure of the organ; thus, those tumors which have their origin in the layer of the muscular tissue near to the peritoneal surface, are crowded out beneath the peritoneum as they increase in size, and become known as subperitoneal fibroids.

On the other hand, if they are situated near to the mucous membrane of the uterus and its cavity, as they increase in size they press into the cavity leading to the formation of a tumor known as submucous, which may be a polypus or a growth having for its attachment or base the entire wall of the uterus, when it is known as a sessile tumor. Those tumors which are situated in the wall of the organ equally distant from the mucous and subperitoneal surfaces form what are known as mural or interstitial tumors. These divisions, then, into submucous, subperitoneal, and interstitial tumors are not variations in character, but are only used to distinguish their situation and relation; they are all histologically the same. Upon the situation of the tumor will depend the subsequent symptoms arising from its presence. One which occupies the cavity of the organ and is pushed into it, will often-times distend the cervix and lead to its expulsion from the cavity of the organ. These growths distend the cavity of the uterus and are covered with the mucous membrane which they carry before them. This membrane becomes thinned, the vessels attenuated or varicose, the surface of the mucous membrane is ulcerated and the patient consequently is likely to suffer from hæmorrhage. First, the periodical flow will be greatly increased, last a number of days; later one will find the patient bleeds upon the slightest irritation. In such cases hæmorrhage is a marked symp-

tom. It may occur as an aggravated flow or take place during the intervals. I am inclined to believe that the tumor in the present instance is an interstitial one involving the greater part of the anterior wall of the uterus; this for the reason that it is found to project over the cervix. If it were situated in the posterior wall it would very likely lead to retroversion of the uterus. The tumor, however, of late has begun to encroach upon the mucous wall of the uterus, interfering with the circulation and consequently caused a prolonged menstrual flow, gradually increasing and at times quite free. The only condition with which this might be confounded would be that of pregnancy; the existence of menstrual flow is not necessarily a contra-indication, for it must be remembered that some women continue to menstruate during the entire period of pregnancy. I have a patient who, for several years, has believed herself pregnant whenever she has an excessive menstrual flow. This is the first indication of her pregnancy and for the first three months she is subject to more or less hæmorrhage at the time she should menstruate.

I remember, during my term as resident in this house, a woman who menstruated regularly during the entire period of her pregnancy and gave birth to twins.

Pregnancy is eliminated in this patient for the reasons, first, that there is an absence of any history, and second, this hæmorrhage has been going on for a number of months longer than we would expect it should for so slight a distension of the abdomen as is here present. Then, again, we do not have the physical signs of pregnancy in the uterus itself. The uterus is firm, more tense than is the pregnant uterus. Then palpation and auscultation will serve to complete the diagnosis. We are forced to the conclusion that we have to deal with growths in the uterus and that the immediate growth is mural or interstitial. As the tumor increases it will give rise to more or less discomfort. It will press upon the structures about it. The size to which the tumor has attained and its situation is such that it is not likely to give rise to the same pressure upon the pelvic viscera as if it were situated lower. As they increase in size, however, they give rise to pressure

upon the intestines and blood vessels, the latter causing changes necessarily in the structures supplied by them. They not unfrequently press upon the ureters running into the pelvis upon either side and this pressure gives rise to distension of the tube, later to distension and destruction of the kidney structure. I have seen instances in which the kidneys have become sacculated as the result of such a pressure. It was a wonder that the patient had been able to survive with such a marked diseased condition.

We come now to the consideration of the question as to what should be the course of treatment in such a case. Shall the patient be subjected to an operation which shall remove the uterus itself, or shall we be content with the removal of the ovaries, or simply treat the symptoms, making her if possible more comfortable, or shall we instead attempt to remove the tumor through the uterus itself? These questions present themselves for our consideration and determination. Medical treatment in such cases has been unsatisfactory; the remedies which have most effect upon the growth are those known as the oxytoxics; that is, remedies which cause contraction of the uterus, such as quinine, ergot, extract of cotton root, and remedies of a similar character. Of these, ergot exerts the most beneficial influence and acts in two ways: first, by causing contraction of the muscular fibres of the uterus itself, and thus decreasing the amount of blood sent into the organ and increasing the ability of the organ to extrude the foreign body from its walls and hasten the time when by this extrusion the tumor ceases to increase in size; second, it has an influence upon all involuntary muscular structures, in that way decreasing the amount of blood sent into the tumor itself.

Other remedies have been administered with a view of limiting the growth of the tumor by producing processes of retrogression similar to those which sometimes take place under the direction of Nature alone. The most important of these is that of the calcification of the tumor. The tumor becomes calcified by the deposit of calcareous material in its structure. An early lecture recounts numbers of cases in which the patients have had extruded from the uterus and vagina calcareous masses which were denominated as uterine calculi.

These, however, were simply tumors which had undergone calcareous degeneration and had been subsequently extruded. To accomplish this purpose, Sir James Y. Simpson proceeded to administer the chloride of calcium in large doses. It was soon found, however, that the action of this agent could not be confined to the uterus, but that it gave rise to deposits of calcareous material in the coats of the vessels and in the valves of the heart. In intrauterine tumors ergot exerts an influence in hastening the time at which the tumor is extruded from the uterus by dilatation of the cervix. It should be remembered, however, that ergot is not an absolutely safe remedy, as through its action it may lead to the too rapid extrusion of the tumor through the uterine walls, whether subperitoneal or submucous, and cause sloughing, with the development of septic symptoms, whether the tumor undergo necrosis or death in the uterus or in the abdominal cavity.

I have seen two cases, in one of whom I believe the extrusion to have taken place, so that the peritoneum and the tumor lost its vitality. The patient died from septic peritonitis. In another case the tumor was a submucous one, but had undergone loss of its vitality and produced considerable elevation of temperature. The tumor was removed, was found to be an offensive necrotic mass, and the patient subsequently died of septic poisoning. Recently a patient came under my observation, fifty years of age, suffering from profuse hæmorrhage which had occurred during the last year. The condition was such as to lead me to infer the possibility of malignant disease. Upon examination the vagina was found filled with a mass nearly as large as my fist. Passing the finger up to the cervix, which could be done with difficulty, it was found that the cervix encircled the projection. It became a serious question whether we had to deal with a polypus or an inverted uterus. Examination under ether, however, disclosed that it was a fibroid polypus hanging by a pedicle from the side of the cervix. It was twisted off and the patient has subsequently done well. Such cases have not frequently been subjected to manipulation with a view of the return of a supposed inverted uterus which was subsequently found to be a fibroid polypus. In the cases in which the tumor is extruded

from the uterus, there is not a question of doubt as to how the mass should be treated. Where the tumor is situated within the uterus, and the cervix can be dilated, it should be separated from the wall and twisted out. Where the cervix is as yet undilated, the question becomes one of considerable interest and if it is found that the tumor has no pedicle and is situated in one wall of the uterus as a base or projecting into the uterus, it becomes a serious problem how it shall be treated. If the tumor is not too large, the cervix may be dilated and split up on either side to the vaginal fornix when the dilatation will be more rapidly accomplished. The tumor is seized with a firm pair of forceps, preferably a Volsella, and then with the finger enucleation is accomplished as far as can be reached. This should be followed by grasping the tumor, twisting until it is turned out of its bed, or the enucleation may be accomplished by the use of the serrated spoon curette of Thomas. These are cases in which the operation is attended with the greatest difficulty and considerable traumatism of the cavity of the uterus. The large cavity left by the removal of the tumor is likely to fill up with blood and subsequently become infected, consequently renders the plan of procedure exceedingly dangerous. It is very undesirable to leave the uterus to fill up by clots of blood. The preferable plan of procedure would be to pack the cavity of the uterus with iodoform gauze. The end of this may be left out of the cervix, and the cervix, where incision has been made, may then be removed at the end of forty-eight or seventy-two hours and intrauterine irrigation is practiced, taking care to afford opportunity for a return flow of the fluid. If the cervix is not sufficiently dilated to permit of the extrusion of the tumor, the latter is dragged against it and held with firm pressure. The cervix will be found to slightly dilate and permit the extrusion of a very large tumor. The gauze packing before mentioned in these cases serves a double purpose; it acts as a drain, by its presence as a foreign body, stimulates the contraction of the uterus, and promotes the elimination of septic material through the activity of the transudation of serum toward it. The treatment in those cases where the tumor has attained to considerable size, I hope to discuss before you in a subsequent lecture.

Communications.

CROUP, DIPHTHERIA AND SCARLET FEVER.*

By F. LEONHARDI,
DRESDEN, GER.

These three diseases have attracted my special attention for some time past. In 1854 I presented a communication before the Dresden Gesell. f. Naturh. Heilkunde, on the subject of Tracheotomy in Croup, after my first successful operation in 1852 done for croup (the sixth at that time done in Germany). In 1888 I combined Croup and Diphtheria in an article and 1891 I gave my views on Scarlet fever, and it is now my purpose to combine my knowledge of all three diseases in one communication.

The question so often discussed, that the old Laryngeal Croup, the Angina membranacea, Angina couenneuse, and the Diphtheria, which has made its habitat among us since 1862, are one and the same thing, the only difference being the grade of infection and the organs attacked, I cannot accept. *There always were and there are yet, cases of pure inflammatory croup—non-contagious, brought about by local irritations of the mucous membranes by cold, wind, chemical irritants, etc., for instance, hydrochloric acid fumes, strong ammonia, etc. It originates in the larynx and extends to the air passages, may take a rapid or slow course accompanied by catarrhal fever. Tracheotomy produces better results in these cases than in diphtheria, I have performed this operation in eleven cases of inflammatory croup with five complete recoveries; in diphtheria the mortality rate is higher. Inflammatory croup was described first by Francis Home, 1765. Broussais, in 1829, opposed Bretonneau's theories regarding its identity with diphtheria which has since been accepted by more recent writers and practitioners, Hensch, Waldenburg, Oertel, Francotte, etc. Virchow recognized as early as 1847 anatomical differences between the croupous and diphtheritic membrane, and in 1865 declared the two diseases to be totally different. The occasional appearance of whitish or yellowish patches on the*

fauces or tonsils in inflammatory croup does not always change to diphtheria.

In the Children's Hospital of Dresden, Dr. Kuther reports (in 1845) in 20 years 35 cases of true croup with 20 deaths, 13 recoveries. Contagion was never observed. I myself saw in 1852 two children in the same family suffering from croup, the youngest died, the elder was saved by a tracheotomy. Dr. Palloni reports a fatal case caused by inhalation of hydrochloric acid fumes. An unmistakable case was seen by me in 1871 in a young man of 22 years who had taken a severe cold in riding to extinguish a fire on a cold night in February; it became necessary to perform tracheotomy on the fifth day of his illness, on the eighth day he was able to leave his bed.

Dr. John, of Dresden, has shown that among animals inflammatory croup often follows an exposure to the heat and smoke of large fires.

Inflammatory croup seems to have occurred more rarely in Germany since the epidemics of diphtheria have been on the increase, but I have met with unmistakable cases in 1868, '71, '75, and in the winter of 1891 and '92.

Laryngismus Stridulus can be differentiated from the true croup in that often a mild emetic, sometimes only a warm drink will shortly relieve the symptoms of dyspnoea and in a few days the cure is complete. In true croup, however, there a persistent fever, obstruction of the air passages, and more or less dyspnoea, this latter influenced by the expectoration of membranous shreds of a yellowish color mingled with the mucus.

The treatment consists in local blood-letting in the cases of well nourished children when the fever is high, and the administration of 5 to 10 centigrammes of calomel hourly. This latter is especially preferable to the use of emetics, and if blood-letting is resorted to it should be done early in the disease, later it would not only be useless, but might do much harm.

In mild attacks in weak subjects, one dose of infusion of ipecac, or tartar emetic in small doses, is indicated, but great care should be used in repeating such doses; solutions of copper or zinc should not be used. Pure moist air and ingestion of large quantities of warm water are indicated. External applications consist in the Priessnitz—water dressings around the

*Abstracted and translated for MED. and SUR. REPORTER by Marie B. Werner, M. D.

throat or a linen cloth soaked in olive oil. Further treatment consists in 3 centigrammes of calomel every four hours either alone or combined with 1 centigramme of sulf. antimon. aur. (German pharmacopœa) until the exudates become loosened, also an emulsion of amygdalæ with sod. bicarb.

The violent attacks of dyspnœa and continuous desire to cough, I was able to combat successfully with small doses of morphia; if this fails, tracheotomy is indicated.

Diphtheria.—The epidemics and contagion of this disease depend upon the Klebs-Loeffler bacillus. It is, according to Oertel and others, first a local disease, located in the posterior fauces. The time of incubation, from the time of exposure to the appearance of the fever, has been usually 5 days; in this Oertel agrees with me. The usual statement is from 2 to 16 days; some think it may even exceed this number. Close observation has shown that the formation of the membrane on the tonsil and other portions of the post pharyngeal wall is the first indication of the disease. This proof of its being at first a local disease conduces to raise the hopes in many of using local applications to destroy or dissolve the membrane, and in this manner cut short the disease by destroying the bacillus. Many canterants, astringents, antiseptics, etc., were tried. The first proved to be useless and sometimes harmful, since it was not always possible to confine them to the affected area, but also exposed more surface to the contagion. As soon as the fever has set in it has become constitutional.

Of the countless number of specifics recommended for internal administration, none have been found reliable at all times; it remains therefore for the physician to rely on rational empiricism for satisfactory and sure therapy. It is always necessary in all diseases to understand their regular course and how much nature may aid toward recovery. Dietl, of the Vienna school, has made the pregnant remark: "Nature alone can heal. We must always study first the boundary of Nature's activity. As long as we are ignorant of Nature's laws, so long will we remain ignorant of our duties as physicians."

The course of the disease if favorable toward recovery is usually marked by a high temperature on the first day, 39° to

40° C.; or it may increase to the third or fourth day; or remission setting in on the fifth day at this time the line of demarkation can be observed in the false membrane and in the infiltration of the mucous membrane; the final shedding of the membrane and necrosed tissues takes place between the sixth to the ninth or tenth day and not later than the fourteenth day. The temperature is usually down after the fifth day, but it has been known to rise again on the sixth or seventh day from 39° to 40° C. never remaining high long at time and ending with perspiration. The unfavorable cases, may be characterized from the beginning by the intensity of the attack, the amount of poison taken into the system producing extensive exudations after involving the deeper structures, thus gangrene of the entire tonsils, the uvula and a larger portion of the palate; this is rapidly followed by sepsis and heart failure. I have seen death follow such symptoms in three cases on the fourth and sixth day.

More often there is an irregular and more tedious course of the disease. This is observed in those of a weak, anæmic constitution, with unfavorable external surroundings or improper care during the first days; for instance, through a lack of recognition of the disease, the membranes may be shed too early, thus leaving a surface exposed, and in this way predisposing to an attack on the deeper structures. This is shown by increased enlargement of the lymphatics. The fever is usually high; sepsis often sets in; changes in the blood and muscles, particularly fatty degeneration of the heart muscles, occur; there is albuminuria, and changes take place in the internal organs. Recovery is slow and protracted, the kidneys may be troublesome for some time, anæmia is persistent, paralysis sometimes forms a troublesome complication, often death follows through contraction of the air passage or from heart failure; this latter condition is shown by a sudden decrease in temperature with a rapid pulse. Fever lasting beyond the eighth or ninth day denotes some deep seated complication. Quinine, antipyrin and other antipyretics are not only useless in the first week but may do positive harm.

Since I have become convinced that the disease cannot be kept from becoming constitutional I have been in the habit of

using, sod. nitrate, sod. bicarb. of each 3 to 4 grms. added to 150 to 180 of aqua dest. and 20 grms. of mucilage of acacia or syr. of althea. M. Sig. Dose for adults a tablespoonful; for children a teaspoonful to half a tablespoonful according to age. With high temperature and congestion of the head, give dose of calomel; this was first recommended by Volguarts and it has not only been my experience but also that of others, that it acts as a good febrifuge and aid to the excretions, acting particularly on the kidneys. I hold that it may have also a local action, possibly in loosening the membrane.

In addition, Port or Hungarian wines are found useful after a few days. In the weak, or when the temperature is low, one can begin at once with this form of stimulation. The anæmia receives later ethereal tincture of iron or quinine, and citrate of iron dissolved in Spanish wine. Sepsis may be combated with solution of chlorine water or by the mineral acids.

The diet during the first week consists of weak broths, milk and softened toast or roll, large quantities of water and weak tea. Milk given in small and repeated doses, I do not consider good, as it readily upsets the stomach, and that which remains in the back part of the throat forms a good soil for the proliferation of the bacilli.

Of great importance is the local treatment of diphtheria. I have alluded to the impropriety of the use of caustics and the attempts at removing the membrane by chemical means as being easily followed by deeper complications.

In place of ice or inhalations I have used oft repeated luke-warm injections, using a syringe holding fifty grammes of fluid. The patient placed in an upright position, a towel pinned around the neck and a basin in front, the injections are made into both nose and mouth, the water allowed to flow into the basin—three or four syringefuls each time, and repeating every two or three hours. The fluids used are either chlor. potass. ten grms. aq. destil. 160 grms., mel rosae 15 grms., diluting this mixture; or I advise a two per cent. sol. of potass. chlor., the utmost care being exercised in instructing the mother or nurse in regard to its use. I do not advise painting the throat with any of the many solutions in use.

(To be continued.)

Society Reports.

THE MEDICO-CHIRURGICAL SOCIETY OF LOUISVILLE.

Stated Meeting, Sept. 2, 1892.

THE PRESIDENT, Dr. F. C. Simpson, in the chair.

OPERATION FOR VARICOCELE.

DR. W. L. RODMAN: Mr. President—This patient (presenting case in person) had a well-pronounced varicocele on the left side; was advised by his family physician to have an operation done, and was referred to me. After purging him very thoroughly for several days, I sent him to the Norton Infirmary, then cut down upon the veins and removed a section about one and one-half inches in length; brought the cut ends of the veins together, uniting them by means of a continuous suture of Chinese silk. The case has done very well from the first, none of the symptoms usually following this operation presenting themselves. Operation done two weeks ago.

I am indebted to Dr. Palmer for a valuable suggestion in connection with the case; that is, first purging and then locking the bowels up and keeping them so for at least a week after the operation. His bowels, I think, were allowed to act on the sixth day, at which time the dressings were changed for the first time. You will notice the wound is healed very nicely, leaving only a small scar. There would have been no scar at all, except for the fact that I left a small opening at the upper end and lower end of the incision for the purpose of drainage; I think, however, this was hardly necessary. Another time I shall not provide for drainage, and bring the wound entirely together. I think it is advisable in these cases for the patient to wear a suspensory for at least sixty days after operation, especially in the summer time.

DISCUSSION.

DR. A. M. CARTLEDGE: There is one feature that strikes me particularly about this case and the excellent results, and that is the suturing of the veins together in order to lift up the testicle. That is the trouble I have found with varicocele operations, the scrotum has become very

much elongated and I have never carried out the varicocele operation taking out a piece of the scrotum, as has been suggested in practice. My results in operations for varicocele have not been as satisfactory as I would like, and I think the method employed by Dr. Rodman of suturing the veins is a very valuable additional step in the operation.

DR. E. R. PALMER: I want to congratulate Dr. Rodman upon the excellent results following the use of iron dyed silk sutures and their incarceration, without any trouble, in place of the catgut that we have been having such bad experience with. The preparation of the patient for operation in cases of varicocele by first purging followed by confining the bowels for eight days is recommended by Gerster, the idea being that there is danger of fecal infection, and that the suppuration which nearly always follows the operation is due to that cause. Gerster makes a very strong point of this fact, and advises that the bowels be kept closed until the external wound has healed; his suggestion of eight days is, of course, the maximum length of time.

DR. WM. BAILEY: I would like to ask how the wound becomes infected from the bowels.

DR. E. R. PALMER: It is a well established clinical fact that it is impossible to prevent the distribution of poisonous material from the feces to the neighboring parts if the bowels are active.

DR. A. M. CARTLEDGE: I would like to ask Dr. Palmer a question: Some two weeks ago, I saw a most remarkable case of varicocele; patient was a boy about seventeen years of age who thought he had hernia. The testicle on the left side was atrophied to such an extent that you could scarcely feel it, seemed to be about the size of an ordinary bean, with an enormous varicocele on the right side. The question is if an operation is performed on the left testicle how much development will take place in the testicle? Also why varicocele occurs with greater frequency on the left side?

DR. E. R. PALMER: I think the testicle is practically gone, and you ought to have a double operation to preserve the other testicle. The most extensive case of varicocele that I have ever seen was one which came under my observation a short time since in a rape case. There was an

entire disappearance of both testicles in the defendant, simply an enormous bag of veins on each side. The case was, on my testimony, dismissed as one of blackmail.

Varicocele occurs on the left side more frequently than on the right, because of the long vein on that side and the manner of its termination—purely an anatomical reason.

PATHOLOGICAL SPECIMENS.

RICE SEED BODIES.

DR. A. M. VANCE: Mr. President—The first specimen I exhibit is a collection of the largest rice seed bodies that I have ever seen; they were removed from a man, a glass-worker, in Indiana, who, for two years has had developing upon the dorsal surface of his right hand, a large diffuse ganglion. I laid it open from the base of the first phalanx of the middle finger and half way up the forearm, turning out nearly a pint of these bodies, besides quite a quantity of milky material. It was very difficult to scrape them out of the ramifications of the different tendons. The wound healed by primary union, and the man has a very useful hand and arm.

STRANGULATED FEMORAL HERNIA, RESECTION: DEATH.

About the middle of July I was called to see a young lady in the morning, who gave the history that for two years she had been under treatment of a "Rupture Specialist," and had worn one of his trusses; that some months before I saw her, he had advised removal of the truss from a right femoral hernia as she was cured. Eight days before I saw her the hernia had come down and had become incarcerated. He and a professional friend put the patient under chloroform, and, after considerable manipulation, stated that the hernia had been reduced. The patient went home and called the family physician, who treated her one week, feeding her by the rectum. About this time her physician left the city, telling her she would get along all right. The next morning I was sent for, and found the woman about twenty-five years of age, very hysterical, rapid pulse and a large tumor in Scarpa's space; I advised an immediate operation, as I believed it to be an irreducible hernia. However she told me that she had had an action of the

bowels each day that week. She failed to state that she had been fed by the rectum. I operated with the assistance of two trained nurses, Dr. Guest administering the chloroform. I found this portion of the ileum gangrenous and ruptured, and found probably a pint of feces in the sac when I opened it. I determined to endeavor to resect, as the old operation of an artificial anus is a thing of the past. I resected about an inch of gut, doing Wolfier's operation, sewing it together by a continuous Lembert suture, inverting the peritoneal coating, so as to get perfect apposition. The young lady did well for two days; had two evacuations of the bowels, but died at the end of sixty-two hours of septic infection from the foul condition of the wound. I feel sure that the operation of resection was a perfect success, and have been pleased to see that Dr. Ransohoff, of Cincinnati, also advocates primary resection in all cases of gangrene of the intestine from strangulated hernia.

APPENDICITIS: OPERATION.

About eleven days ago I was called to see a gentleman forty-two years of age, with Dr. A. M. Goodman; the history was that he had been quite constipated ten days before. He had succeeded in getting a movement of the bowels, but continued sick with considerable pain, for the first days of his illness, being particularly referable to the region of the appendix. However, when I saw the patient, there was no severe pain or tenderness over that point, and no marked tympanites; but there was some swelling just below the ribs on the right side, and, upon deep pressure, some tenderness. I advised that operation be delayed for forty-eight hours and see what developed. On the morning of the second day thereafter, I was again called; found the man with high temperature, delirious, etc. Dr. Bodine was also called in consultation at this time. We made an incision three inches long on a level with the post-peritoneal space so that drainage could take place there; evacuated a large quantity of thick very offensive pus, and introducing my finger I drew out two little casts of fecal matter about as large as a lead pencil and two inches long. I then irrigated the cavity and in addition to the fecal matter which came away with the irrigation water, we found this mem-

braneous looking affair that you see here, which upon examination, proved to be the appendix vermiformis. The case has progressed very favorably since that time; the delirium left him in a few hours, and he has been perfectly rational and free from fever. The wound, now, after eleven days, has healed and the cavity is closed up. Evidently when Dr. Goodman first saw the patient, there was a circumscribed abscess around the appendix, which later ruptured into the post-peritoneal space, while the patient was lying on his back, proving positively that the appendix sloughed off into the post-peritoneal space, a question which has been in doubt. I failed to state that since the operation, and before closure of the wound, a considerable quantity of material looking like coffee grounds has come away; also a piece of egg shell about half the size of your finger nail.

RESECTION OF COCCYX.

The next specimen is a coccyx removed from a young lady seventeen years of age, who gave the history that six years ago when she was eleven years of age, she had a chair pulled from under her, allowing her to fall upon the floor causing considerable pain. In the last two years only, has she been seriously inconvenienced by pain and tenderness in the sacral and spinal regions. She had been treated by several physicians and a spinal brace had been recommended by a so-called "Surgeon" in town. Upon examination it was found that the coccyx presented at right angles toward the rectum, and was perfectly movable. It was removed quickly through a very small incision. I did it by first cutting through its junction with the sacrum, dissecting down around it without making the large opening that is ordinarily done.

BOWEL OBSTRUCTION: OPERATION.

Here is a little specimen which does not amount to much as far as appearance goes, but seems to have played a very important part in the case in question. The patient was a young lady twenty-five years of age, with history that on Friday afternoon she had an eating match with her sister to see which could get away with the greatest amount of grapes, afterward eating a musk melon apiece. Friday evening she was

taken with great pain in the abdomen referable particularly to the region of the umbilicus. She began vomiting about the same time, which continued until I was called to see her. On Saturday about twelve o'clock it became fecal and continued so all day Sunday and Monday. When I saw her Tuesday she was still vomiting fecal matter, the family in the meantime had been giving her considerable milk, which was mixed with the material evacuated from the stomach, in a curdled state. Upon examination I found the abdomen moderately tympanitic, but no cake, however, very tender and painful on pressure; temperature $100\frac{1}{2}^{\circ}$ F., pulse 120. I recommended an immediate laparotomy, which was consented to, and with the aid of Dr. Forwood and two laymen as assistants I did the operation. When I reached the interior of the abdominal cavity, I could discover no particular morbid condition; I then began to read the distended ileum. I had probably read about two-thirds its length, when in trying to raise it further, something gave away. I found on this portion a marked constriction as if a half inch rope had been tied there for a long time. Just to the side of it was this little body, which seems to me to be a mesenteric gland: however I tied it off. It was evidently an attachment of some kind, possibly the appendix. The intestines immediately filled up below, and I milked the fluid from the distended portion of the ileum and closed up the external wound. The patient continued to vomit fecal matter for twenty-four hours after the operation, but in smaller quantities and with less frequency than before. Salines were administered by the mouth, which caused free movements of the bowels. I heard from the patient to-day, she is still alive and prospects seem to favor complete recovery.

CARCINOMA OF LEFT APPENDAGES AND UTERUS: OPERATION.

This specimen was removed from a maiden lady thirty-five years of age. Sae gives the history of having had painful menstruation, pain particularly severe in the region of the left ovary, for twelve years. Eight or nine weeks before she called upon me, she had been attacked with nausea and vomiting which lasted three days. She states at this time the

enlargement of the abdomen commenced. When I saw her the abdomen presented the appearance and size of about a six months' pregnancy, a curious feature of it was that the enlargement appeared to be general. If it was a tumor, the tumor was controlled by the abdominal contents, rather than the contents being controlled by the tumor, as is usually the case. It was impossible to make a diagnosis of cyst, that is, a differential diagnosis between cyst and abdominal accumulation. Dr. Bailey saw the case, also Dr. Hays. She was also put upon purgatives, rochelle salts being given in one-half ounce doses each morning for two weeks. After I saw her I put her to bed and she had partial suppression and retention of the urine, which required catheterization for two or three days. The only medication for two weeks was rochelle salts, digitalis and acetate of potassium. Two weeks ago last Tuesday at the Norton Infirmary I did an abdominal section, exploratory; found a tumor presenting a very peculiar feature being that it was not entirely filled with fluid. It extended out into the loins, around everywhere, among the intestines and abdominal organs, without having any definite shape. It was punctured and about a gallon of fluid removed. The tumor was easily delivered, and found to be attached to the left horn of the uterus by a very small pedicle. The tumor evidently contained the left ovary and tube; a mass of very friable material was found at the point of attachment to the uterus. Fearing further trouble from the friable condition of the pedicle, I passed the ligature around a portion of the left horn of the uterus to be sure that it would lie in good tissue. The patient made an excellent recovery being able to leave the Infirmary on the tenth day after operation. Dr. Frank has made microscopical section of a portion of this tumor, the specimen being at present on the slide of the microscope for your inspection, and he pronounces the trouble carcinoma; also states that the carcinoma is mixed with uterine tissue, showing that the uterus is in a carcinomatous condition. The question now presents itself as to whether it would not be good surgery to extirpate the uterus per vaginam or otherwise. The fluid contained in the cyst was the ordinary coffee colored ovarian fluid, or such as we usually see in ovarian cysts. I will

further state that the uterus appeared to be perfectly normal in shape, size and condition, as was also the other ovary.

DISCUSSION.

DR. JOHN HOWARD: I have carefully examined the specimen on slide of the microscope, and think there is no doubt but it is carcinomatous in character; uterine structure is also plainly discernible.

DR. A. M. CARTLEDGE: I think the case of appendicitis reported by Dr. Vance is doubly instructive; it in a practical way proves what certain men who have paid a great deal of attention to this subject in the last two or three years have been claiming; that is, that all of the trouble in the region of the cæcum belongs to the appendix primarily, that the appendix is the offending organ. Here is a case that according to its clinical aspect would be called perityphlitis, and yet the history proves that the appendix sloughed off into the post-peritoneal space; showing that while the appendix is an intra-peritoneal structure, yet, under certain circumstances, it might find its way back into the cellular structure. I think it is an exceedingly interesting case, and take it that it will be a long time before we will see another case that proves as much as this one.

In regard to the last case reported by Dr. Vance—it is certainly a very unusual case. Her age is against cancer, and all the history makes it puzzling. If the microscopists prove that the trouble is of a cancerous nature, I think the indications demand an immediate hysterectomy. I should prefer the vaginal hysterectomy, and think the operation might prolong the life of the patient for quite a length of time. From the examination I made of the specimen, I think there is no doubt about its being a malignant disease.

DR. A. M. VANCE: As Dr. Bailey saw this case, I would like to ask his judgment as to the propriety of an operation, removing the uterus.

DR. WM. BAILEY: The case seems to me to be in such good fix, that while it might be good surgery to extirpate the uterus, still I would be disposed to wait until there was some further manifestation.

DR. F. C. WILSON: I think it very probable that the case of appendicitis reported by Dr. Vance was caused by grape seed. I reported to this society several years ago the case of a little girl who had

appendicitis, later dying from general peritonitis, caused by swallowing blackberry seeds. In the same family there occurred about ten days ago another similar case, the result of swallowing grape seed. The patient had been ill several days before I saw him; I recognized the features of it, and told the family my suspicions. I asked Dr. Dugan to see the case and agreed with him in advising an immediate operation. This was done, and the appendix was found to be perforated, and a collection of matter was found in the neighborhood. This was evacuated and the wound properly dressed. The patient, however, died in about thirty-six hours after the operation.

The question arises in my mind whether the result in the case reported by Dr. Vance would not show that there is possibly less danger in allowing these cases to take their own course, the appendix often sloughing off making its way backward through the posterior opening, rather than opening in front through the peritoneum, as was done in the case I have mentioned. In this case the peritoneal cavity was opened, for the reason that the abscess could not be reached by any other means, and, I think, possibly the manipulation and exposure contributed something toward infecting the general peritoneum. It is a question whether nature's course would not be the safest of the two. That is, it might often be better to wait and let the matter gravitate backward into the post-cæcal space.

DR. J. G. CECIL: In reference to the last case reported by Dr. Vance all authorities, I believe, are agreed that the operations for removal of cancerous womb depend upon the extent of the involvement. If the cancer has extended to the womb, I think there is very little hope in any operation, except complete removal, no matter how it is done. It seems to me the determination as to what should be done in this case, would depend upon two things; first, what the exact relation of this growth was to the womb, whether it were part of it or not; if it is a part of it, then evidently the womb is cancerous, and, of course, if the involvement does not extend to any of the attachments or any of the surrounding organs, then hysterectomy I think would be the thing to be done. If, however, after this has been done any of the structures which are adjacent to the

womb have been infected by contiguity, then the operation would be of no avail. In other words, if the cancerous growth extends to structures outside of the womb, and its attachments, then the operation would promise no relief, and I think the woman would in all probability live longer without operation than she would with it. It, of course, is a very difficult question to decide exactly where the limit of this growth is. If it is confined to the womb, then remove the womb; if it is outside of it (and apparently it was outside of it), then it seems to me that the indications are not so favorable for operation.

DR. A. M. VANCE: This body which you see here was separated by a small pedicle from the uterus; this body however was very friable and the uterus was lifted up when the ligature was applied, and about three-fourths of an inch or more of uterine tissue was tied off. In other words, the section made to remove this growth was through uterine tissue. Dr. Frank asked me at once when he was preparing the microscopical section if I did not remove the uterus, as there were evidences of uterine tissue mixed with the carcinomatous cells. So, I do not think there is any doubt but there are cancerous cells in the uterus proper.

DR. WM. BAILEY: In this connection, I would like to say that it was thought at the time of operation, that the uterus was about the healthiest thing we had about that neighborhood. If the disease is malignant, it has already invaded tissues beyond the uterus, and the removal of the uterus will not save the patient.

DR. TURNER ANDERSON; Concerning the last case reported by Dr. Vance. It seems to me it would be advisable to wait a little while before suggesting operation. It is true there is some risk in waiting, If the trouble recurs involving organs other than the uterus, then, of course, a vaginal hysterectomy would be out of the question, and the chances of giving the woman the benefit of operation would be taken away from her. The fact that the portion of uterine tissue examined contains evidences of carcinoma, is altogether in favor of vaginal hysterectomy. It is absolutely necessary that the uterus should be perfectly movable in order that vaginal hysterectomy may be performed. The liability to recurrence is very great. In one case which I saw quite recently, the bladder

was wounded in the operation, a vesico-vaginal fistula was left, and in less than three months this fistula became carcinomatous. The woman is still living but has a very large and painful nodule in the bladder.

DR. C. SKINNER: In regard to the future of the last case spoken of by Dr. Vance. Unhesitatingly I think immediate operation is the thing to do. I would not delay the matter, just as soon as the patient's consent could be obtained, I would go ahead and remove the uterus, and the ovary and tube on the other side. I cannot agree with any one that it would be wise to await further developments; it may be too late for operation to promise relief. I think the woman will live longer and the chances of ultimate recovery will be greater by removing the uterus at once. As to the mode of procedure, I should prefer the vaginal hysterectomy.

DR. H. M. GOODMAN: Referring to the case of appendicitis reported by Dr. Vance: I would like to hear one or two points discussed that I do not think have been brought out. One point raised by Dr. Wilson is the question of waiting; when I was called to see the case in question about the eleventh of August, I found the man complaining of constipation, pain over the appendix, temperature 103° and considerable tympany. I pronounced it by the old term perityphilitis. The case progressed very well for the first four or five days, then I considered that it was becoming surgical and advised the calling of a surgeon, and Dr. Vance was asked to see the patient about the seventh day. Two days before he saw the case, the pain in the region of the appendix had suddenly ceased. He was a little in doubt as to whether it was a case of appendicitis or not and so expressed himself; that it might be simple abscess, and advised waiting for forty-eight hours. Another point raised by Dr. Anderson as to whether the appendix is intra or extra-peritoneal: I remember in my dissections at the University, I opened somewhere about one hundred and fifty abdomens, and think I can safely say that in no more than fifty per cent. the appendix I noticed had a mesentery of its own; while in other cases the appendix was behind the peritoneum. In all cases where there is a mesentery, perforation is most likely to open into the peritoneal cavity. With further reference to the case under

discussion: I do not know why I insisted upon this man remaining in the dorsal position, but I did from the very start; whether this favored the gravitation of pus into the subperitoneal space or not, I do not know. But the question I would like to hear discussed more particularly is, whether as a general rule in cases of appendicitis, it is best to operate in the first three days, and what have been the results of such treatment. Surgery, of course, in these cases, offers the only hope of relief, and I think the case in question was simply a fortunate circumstance which we did not know had taken place.

Now, there are two forms of appendicitis; one which is a non-perforative variety, without suppuration and tends to get well by resolution, and is generally recurrent. The other form perforative appendicitis, with suppuration and often abscess or diffuse peritonitis. I had a case of this kind about seven years ago, a beautiful young lady who had recurrent attacks of typhlitis, some fifteen or eighteen in number, and she died. In all cases of recurrent typhlitis I think the operation for removal of the appendix indicated during the intermission. In cases of suppurative typhlitis I think the time for the operation can only be determined by the individual indications of the case.

DR. F. C. WILSON: Now this raises another question in regard to the cases that happen to recover after an attack of appendicitis, possibly without suppuration, but recurring from time to time: I remember seeing about a year ago a little boy that I felt satisfied had inflammation of the appendix, and expressed my fears to the family, but resolution seemed to take place possibly without suppuration, and I heard no more of the case until I saw an account of the little boy's death, probably from recurrence of the same trouble. I have seen one other case within the last year that evidently was appendicitis, which recovered by resolution, but left considerable tenderness—Now is that boy to look forward to a recurrence of these attacks with a possibly fatal termination at some time, or, is it proper even after the case gets well, to perform an operation removing the appendix? Would that not be a justifiable operation, thus relieving the case of all future danger? Whenever this inflammation occurs once, is not the patient more liable to it after-

ward, so much so that the removal of the appendix would be justifiable?

DR. H. A. COTTELL: From the examination I made of the specimen under the microscope (section of tumor, Dr. Vance's case) I should not hesitate a moment in pronouncing it malignant growth, but, when it comes to the question as to whether it is really a carcinoma, I would not like to give a positive opinion without a further and more careful examination.

DR. A. M. VANCE: I would like to answer Dr. Goodman: In the East it is recommended that whenever McBurney's point is well marked, and the temperature exists forty-eight hours over 102° F, the case should be operated upon.

EXTIRPATION OF INGUINAL GLANDS.

DR. W. L. RODMAN: This specimen was taken from patient referred to me by one of the gentlemen present. He had several enlarged inguinal glands following the course of acute gonorrhoea. The doctor thought that he would be better off by having these glands dissected out, rather than to wait for them to break down spontaneously. I made an incision, and, in removing the glands, I found that this one had already undergone suppuration. I consider that I was very fortunate in being able to get it out without infecting the wound. I closed the wound with a continued buried suture of Chinese silk. The wound healed by first intention and the case was discharged on the third or fourth day after the operation. I think the patient was saved at least a month's suffering by dissecting out these glands. I have been doing this operation now for two or three years, and every time I do, I feel better satisfied with the result.

DISCUSSION.

DR. A. M. CARTLEDGE: My experience confirms the statement made by Dr. Rodman, that we do not remove enough of these enlarged glands, not only on the ground of saving a long convalescence, painting with iodine, etc., but they usually go on to suppuration, which can be prevented by early removal. The same thing is true of enlarged glands of the neck, whether they be tubercular, chancroidal, or otherwise.

DR. A. M. VANCE: My experience with enlarged glands, especially those about the neck has been quite different. I believe

when we cut down and attempt to remove the large number of glands in the neck, we do not get them all out. Manipulation seems to cultivate these glands. I had a patient not long ago with enlarged glands of the neck, and at the first operation I removed about twenty; in a short time they had reappeared, and I again operated, removing perhaps thirty more. The patient seems to be entirely well now. I have often worked on these cases for an hour, or even an hour and a half. I remember one in particular where I dissected enlarged glands for about an hour; after two or three months they reappeared seemingly as numerous as before.

DR. A. M. CARTLEDGE: I believe that we all profit more by our mistakes than by our successes. In connection with the removal of these glands about the neck; my early experience in the removal of these glands was similar to that related by Dr. Vance. I think if the Doctor in dissecting out these enlarged glands, would be sure to remove all the gland capsule, he would not have recurrence.

DR. E. R. PALMER: I would hesitate very much about dissecting out chancroidal glands, because of the almost certainty of infection of the wound. I have had very little trouble from enlarged glands in gonorrhœa; I have dissected them out in a few instances, they were however adjacent to glands that had already suppurated and been opened. I, of course, would not molest the inguinal glands in syphilitic adenitis.

DR. WM. CHEATHAM: I have had in the last few months three cases of enlargement of the inferior maxillary glands, which I have treated in rather a unique way by the bougie; all three were cases of obstruction of the duct with retention of the secretion.

In some cases it is with much difficulty that the opening to Wharton's duct can be found; in one case by staining with a solution of fluoresceine I was able to locate the opening. In another case the opening had to be slit with Bowman's knife, then a small Bowman's probe was passed and gradually increased in size until the duct was dilated; after this an eustachian bougie was used and passed to the gland, the secretion gradually emptied by gently milking and pressure. In those cases where there is much inflammation of the gland, hot applications should be made externally. With several days' treatment

by this method the glands are easily reduced. One case recently treated in this way had been advised to have an incision made externally.

I am in favor of this operation for enlargement of these glands in preference to any external incision, as no scar is left.

Translations.*

M. B. WERNER, M. D.

To determine certainty of death in a cholera patient, Dr. A. Netter (*Rev. med del Est*;) Neither the arrest of respiratory movements or cardiac action are signs of death in a cholera patient. Claude Bernard has compared the asphyxiated stage of the patient to the winter sleep of the ground hog. The exhaled air contains no more carbonic acid gas than that which is inhaled; the arrest of the circulation is for that reason not a sign of death. The successful restoration of a patient in extremis, by intra-venous injections, necessarily establishes doubt. Netter proposes therefore in order to be certain of the death of the patient the following: 1. Through a stomach tube introduce a large quantity of fluid into the alimentary tract, the epithelial coverings having become so thin that there is a possibility of the water being absorbed. 2. Place the body in a warm bath. In the year 1846 a child of 6 or 7 years who was supposed to be dead was placed in a bath of 14° C. It raised itself up and spoke at the time; unfortunately it was taken out after a half hour and it was scarcely in bed when it died. The simplest method, however, would be to make a small incision through the abdominal wall in the presumably dead cholera patient and inject a large quantity of warm water into the abdominal cavity. This operation is a simple one and in case of restoration the results can be nothing but satisfactory since it has lately become customary to introduce large quantities of warm water into the peritoneal cavity during operation.

Some notes upon cholera in the pregnant are made by the principal physician in the State Hospital, Saratoff, Dr. Tipja-

*Translated for the MEDICAL AND SURGICAL REPORTER.

koff, in *Centralt. f. gynak.* Of 243 women admitted there were seven pregnant; of these seven, four between three and four months, two in seven months and one in nine months. Tipjakoff was not satisfied that the foetus died from the cholera poison but that the increasing prostration of the mother in the arrest of the interchanges of gases and the hæmorrhages between the uterus and placenta are sufficient themselves to destroy the life of the child.

Notes from the International Physiological Congress held at Luttich, 29, 30, and 31 of August, 1892: Wertheimer, of Nancy, made some experiments, according to Schiff, by injecting bile into the blood. The separation of these fluids increased the field of his studies. The question arose whether the injected products enter the liver or if they produce a more active secretion of the liver cells. Wertheimer used the bile of the sheep which has a spectrum of four characteristic stripes, while the bile of the dog as gathered from a biliary fistula shows no spectrum. When an injection is made into the vein of a dog of several c. c. of sheep's gall, one can find after fifteen minutes, the spectrum of the four characteristic stripes of sheep's gall in the fluid passing from the biliary fistula in the dog. When the injection is made into the mesenteric vein the immediate passage of the bile into the liver is proved.

The cerebro-visual centers in the dog and ape: Vitzou ablated the posterior portion of the left hemisphere corresponding to the lobus occipitalis of other mammalia until he reached the neighborhood of the cerebellum. He placed a bandage around the left eye of the dog, and observed that the animal could see but little through the uncovered eye; if he held a piece of meat near the three inner quarters of the uncovered eye the dog was unable to see the meat; as soon, however, as he placed it at the outer portion of the visual center the dog saw it. If the right eye is covered and you bring the meat near the outer quarters of the uncovered left eye the dog remains indifferent, if it however is brought near the inner quarters of the same eye the dog sees it at once. There is then homogeneous hemianopsie and

an incomplete crossing of the nerve filaments in the chiasma. If the same operation is repeated on the remaining occipital lobe the animal becomes totally blind. The conclusions from this are that the removal of the occipital lobes results in a loss of visual perception. This opposes the results of the experiments of Goltz who claimed that a dog deprived of his brain lived eighteen months giving no signs of blindness. Ferrier and Yeo have placed the center of visual perception in the gyrus angularis. Vitzou has removed the gyrus angularis on both sides and was unable to produce blindness.

Total ablation of an entire hemisphere of the brain of the dog: Vitzou removed in April the entire left hemisphere of a dog three and a half months old. It was noticed on the following day that when the dog stood upright the limbs of the right side were relaxed and wanting in tone. In walking it was observed that the animal touched the floor with the outer portion of the right extremities and had a tendency to turn itself from right to left. About ten days after complete recovery, the dog was lively, but it was noticed the right extremities could be used less than the left.

Subcutaneous transplantation of the pancreas: Hidon, from Montpellier, was unable to successfully transplant the pancreas of the dog beneath the abdominal integument; it continued to act as seen by a small fistula through which the pancreatic juice exuded. This juice digested albumen, emulsified fats and contained sugar. In connection with the theory of diabetes of pancreatic origin he has made the following deductions. First, if the pancreas has been transplanted in a dog in which the intra-abdominal portions have been carefully extirpated there will be no glycosuria no matter how long the dog is under observation. Second, if the transplanted pancreas is extirpated glycosuria will at once appear. Third, if the transplanted pancreas begins to atrophy glycosuria will appear at once and increase in proportion to the progression of the atrophy.

Courmont and Dyon, of Lyons, interested themselves with the question—does Tetanus poison act upon the muscle or

nerve? They injected some of the poison into a frog. After the muscles became rigid they injected curare, after which the muscles relaxed. This led them to conclude it was no muscle poison. The authors in addition, to prove their theory, severed the main nerve supply of one hind leg of a frog and there injected the Tetanus poison. The enervated foot remained relaxed. The animal lived several weeks. This experiment again showed that Tetanus poison was not a muscle poison.—*Deutsche Med. Zeitung*, 1892.

Dr. L. E. Keegan (*Provincial Medical Journal*) speaks of the satisfactory action of boric acid in Typhus. He has used the remedy in fifty-two cases in doses of 0.6 to 1.2 grammes every four hours. Meteorism and diarrhoea at once become reduced and disappear, the tongue becomes moist and the general condition improves. In two cases Keegan believes to have shortened the attack by this medication. In the *Medicine Moderne* this method of treatment has also been recommended and 3.6 grammes of boric acid have been dissolved in a half litre of water and taken in divided doses in twenty-four hours. Du-jardin-Beaumetz recommends a mixture of boric acid with other antiseptics. Borac acid, salol, beta naphthol, salic. of bismuth, each 0.25; M. ft. pulv. no. 12. S. One powder four times daily. The condition of the kidneys must be carefully watched and the urine examined daily for albumen.

Gibert has collected the statistics of 1000 infants who had been raised on the bottle and 500 which have been nursed at the breast. Of the 500 only two suffered from the disorder of dentition. Of the 1000, fifty-eight suffered from stomatitis, twenty-eight of Fraisen and he concludes from this that teething in children is aided through the normal physiological use of the gums at the mother's breast.—*Medicin Neuigk*.

Foucault and Béranger-Féraud recommend the following drink for gout: Acid lact., aqua dest. ana 40.0; of this solution a teaspoonful each morning to three or four glasses of water sweetened if desirable and drunk during the day. At the end of twenty days an intermission is

advised of ten or eleven days, to begin in same manner at end of that time. This is continued through many years. The above named authors believe they have seen a diminution in frequency and severity of the gouty attacks, and think there may be a possibility of their entire disappearance. The long continued use of lactic acid produces no deleterious effects on the digestive apparatus.—*Medicin Neuigk*.

Tolerance of the abdominal cavity and uterus in pregnant women: In contradistinction to the small provocation for abortion in women in the higher grades of life, it is interesting to note the grave accidents to pregnant women living in the country notably through cow horns, which heal sometimes without interrupting the pregnancy. In 14 cases in which the uterus was torn, only 4 women died and this in the face of the fact that the tear was not sewed in any of them. Two children of the 4 dead mothers lived and 4 times mother and child lived. Even gun-shot wounds into the uterus, the ball remaining in the foetus, have resulted in recovery after the foetus was born; three cases of which were mentioned. A pregnant girl plunged a hat pin through the umbilicus into the abdominal cavity, aborted without further trouble than a short suppurating sinus near the navel.

Another case of recovery in a mentally diseased woman who had made a $4\frac{3}{4}$ incision in the median line through the abdomen and extracted the foetus and killed it.—*Medicin Neuigk*.

ANTIPYRINE IN EPISTAXIS.

Dr. E. G. West, Boston, Mass., says that he has yet to find an agent so reliable in epistaxis or nose-bleed as antipyrine. It is his custom when a case of unusual violence occurs to saturate a pledget of cotton in a solution of antipyrine or in the dry powder and introduce it into the nostril. It stopped the bleeding in every instance that he applied it. The patient by this method is relieved of the disagreeable tarry clots formed by the solutions of iron so commonly used for this purpose. He finds antipyrine is an antiseptic that can be relied on, but he has learned to use it in smaller doses than formerly, and by so doing he can acquire the same results.—*Ex.*

Abstracts.

DIPHTHERIA.*

By A. BOWEN, M. D.,

NEBRASKA CITY, NEB.

Eleven years since, at the request of this Society, I addressed you upon this subject; and if to-day, at the request of your "Chairman of Committee on Practice of Medicine," I come before you and say that I have no new suggestion to make on treatment, you may think that I lack the spirit of progressiveness and that the light which science sheds over all things had not visited my eyes. The revelations of nature are old, and the powers of drugs remain the same to us that they did to our fathers. The same treatment with which I used to abort tonsillitis forty years since in the Catskill mountains, is all-sufficient, and ever has been, in extinguishing diphtheria, if the patients are seen early and treated from the first with *over-bearing and persistent earnestness*. Nothing less than this will answer and this always will.

I am not blind to the fact that different epidemics of diphtheria, like different epidemics of small-pox and scarlatina, possess different degrees of malignity, and will claim their victims; but I do know that all of you who are *terribly in earnest* can limit the mortality to less than five per cent. I do know—I do not conjecture—that German children are more obnoxious to the disease than American children; probably this is due to their different mode of living. Three years since, I was called to two families of Germans, eighteen miles from my residence. Seven members who were children in one family and four in the other. They had contracted the disease from the contagion of a corpse at a funeral. One in each family had had the disease for several days before I was called. I said to the parents that these two would die. Knowing that my word was law in those two houses, I unhesitatingly commenced the same course of treatment through the day among the sick and the well; among them was one baby who nursed a bottle. Their throats were earnestly swabbed every two hours during the day; and the sick during both

day and the night. As fast as they came down with the disease I swabbed during the night as well as during the day. Every child had the disease and every child (except the one referred to above) in each family recovered. These two are the last children I have lost of diphtheria.

When epidemic commenced last November the Chairman of the Board of Education wrote to all the medical men in town requesting their opinion of the necessity of closing the public schools; all but one dissuaded them from closing. It was the mildest and the widest spread epidemic of diphtheria I ever saw. Still, there is enough diphtheria in every case, to kill, if neglected. I always grow poor in flesh when treating diphtheria. A gargle for children who are exposed to contagion or infection, a four per cent. solution of carbolic acid, thoroughly mixed with cold strained tea, either gargled, or better yet, mopped deep in the throat every four hours; or if the disease has invaded the nostrils, or nares, or if it is threatening them, the same wash sent through a two or three drachm glass syringe with a somewhat forcible jet; a small cork being fitted to the nostril of the child with an aperture through the cork to fit the nozzle of the syringe and the child always held perpendicular. If the disease has invaded the throat, (as it usually has), then more earnest means must be used there; of twelve parts by measure,

One part is to be carbolic acid.

Three parts are to be sulphurous acid.

Four parts are to be glycerine.

Four parts are to be mur. tincture of iron.

The throat to be swabbed or mopped deep with this solution every two, three or four hours. They must eat and they must sleep, and here comes in the tact and discretion of a good nurse, and all you possess of these qualities you will find available. Intubation is a more respectable apology than laryngotomy, but the latter is merely a bloody excuse for early neglect. Arrest the disease at the earliest moment and save from its terrible alternatives—*asphyxia* or *septicæmia*. If your patient resists you, swathe him or her tightly from the chin to the toes, and get the mouth open by the help of a soft pine wedge; they will not resist you if their throats have been properly educated.

As to the cause of diphtheria we do not

*Read before the Nebraska State Medical

possess much more accurate information than we do of the cause of small pox, or scarlatina, or the epizootic. We hear that the latter disease has struck our Eastern coast and we know that in about so many days it will show itself in our stables, though the wind may blow a gale from the west all the intervening time. Diphtheria is surely "a pestilence that walketh in darkness." Belknap says in his history of New Hampshire that a visitation of what was probably (from the description) diphtheria first visited our country in 1735. Of the first forty who were attacked, none recovered.

In the parish of Hampton Falls, twenty-seven persons died in five families and one-sixth of the population died in thirteen months, and twenty families buried all their children. We may have reason to fear (for we have seen a similar error committed in our day) that some physicians may have depleted for the wretched fever which accompanies the disease, forgetting that it is adynamic in its character. Belknap says of the Boston visitation at this period, "The physicians having by desire of the selectmen held a consultation, published their opinion that it proceeded entirely from some *occult quality in the air*." Can their successors of the fourth generation give a more definite answer with assurance? And at what earlier day did an American town institute *scientific inquiries* as the basis of sanitary measures? I cannot look upon diphtheria, even in our present ignorance of its prime cause as one of the opprobria medicorum, but as a disease to be met earnestly and in a hopeful mood.

ON CERTAIN DIURETIC DRUGS.

Speaking of dropsy, Dr. Haig (*Lancet*, July 9th) says: All drugs that hinder the solubility of uric acid and clear it out of the blood relax the arterioles and cause diuresis, and indeed not a few drugs whose diuretic action is well known owe their property entirely to their action on uric acid and so indirectly on the arterioles. Thus opium, mercury, iodide of potassium and other iodides, salicylate of soda, caffeine and lithia salts, all produce more or less diuresis and diaphoresis, and all have this also in common—that they clear the blood of uric acid. Opium is often used, either alone or in combination, for its diuretic or diaphoretic properties. I have

shown that it raises the acidity, diminishes the excretion of uric acid, and clears the blood of it. A good deal has been written about the diuresis produced by mercury and I have shown that it forms an insoluble compound with uric acid, clears it out of the blood and relaxes the arterioles. Iodides also are fairly well known as diuretics, and my researches show that at the time they cause diuresis they diminish the excretion of uric acid and clear it out of the blood, thus allowing the arterioles to relax. Further, the uric acid thus held back passes through the blood when the drug is let off, causing contracted arterioles, headache and scanty urine; in fact, a rebound, just such as is met with after opium, mercury, iron, lead, lithia, or any other members of this group. A good deal also has been written about the diuresis produced by salicylate of soda, but its effects in this direction are entirely dependent on the fact that it clears the blood of uric acid. Unlike the drugs I have already mentioned, it clears the blood of uric acid, not by rendering it insoluble and retaining it, but by rendering it soluble and producing its elimination by the kidney, and a knowledge of this fact gives us the explanation of an important point in which the diuresis produced by a salicylate differs from that produced by the before-mentioned drugs. Take a dose of opium, mercury or an iodide, the diuresis they produce comes quickly, within a few hours of swallowing the dose—*i. e.*, they quickly clear the blood of uric acid and relax the arterioles; but with a dose of salicylate this is not so. Take fifteen grains of salicylate of soda three or four times in one day, the urine will not be at all profuse; on the contrary, it will be rather scanty. Continue the same dose next day and towards the end of the second twenty-four hours there may be a marked diuresis.

Now, the explanation of this is simple. On the first day of its action the salicylate meets with a large amount of uric acid and passes a great deal of it through the blood and out by the kidney. The arterioles are consequently contracted and there is no diuresis. On the second day, however, the immediately available supplies of urate run short and excretion falls down almost to the level of formation. There is but little urate in the blood, the arterioles can relax and diuresis results. If a

patient has a large amount of urate in store the diuresis with salicylates may not occur till the third day, but in my own case it comes almost invariably about the end of the first thirty-six hours. It is evident, then, that the diuresis produced by a salicylate is not due to its direct action on the arterioles, but to its direct action on the amount of urate contained in the blood, and varies in accordance with the amount of this substance that it meets with. Precisely the same thing holds with the alkalies, soda and potash. Caffeine is well known to cause diuresis. I have pointed out that it diminishes the excretion of urates and relaxes the arterioles, and is well known to be useful in conditions of migraine and depression, no doubt from its action on the urates in the blood. Salts of lithia, again, produce a marked diuresis and this diuresis comes quickly, resembling that produced by opium, mercury and the iodides and differing from that produced by salicylates. But lithia salts act as alkalies, increasing the alkalinity of the blood and diminishing the acidity of the urine, and we have just seen that the alkalies (soda and potash) increase the secretion of urates and diminish the urinary water. Here again, as in the case of salicylates, we have the most absolute proof that the scanty urine or diuresis produced by drugs is due not to their action on the vessels, but solely to their influence on the solubility and excretion of urates, which have a powerful influence on the vessels. What is the action of lithia salts on the excretion of uric acid? They greatly diminish the excretion of uric acid, clearing it out of the blood and relaxing the arterioles; hence they produce diuresis. Soda and potash increase the uric acid and diminish the water.

EXCORIATIONS IN INFANTS.

Dr. Floyd M. Crandall, in an interesting article on the management of the newborn infant, states that he has obtained better results from an oily preparation than from powders, where excoriations are severe. He recommends the following, proposed by Fox:

R	Acid Salicylici	gr. x.
	Bismuthi subnit.	5 ii.
	Amyli	5 iiii.
	Ung. aq. rose ad	℥ i.

—N. Y. Med. Jour.

THE CARE OF THE NASAL PASSAGES DURING CHILDHOOD.

Dr. W. F. Strangways, in an article in *Physician and Surgeon*, calls attention to the care and treatment of diseases of the nasal passages, during early childhood. While great results are being achieved by preventative medicines, there are some fields sadly neglected, one of which is nasal affections and acute colds.

Between the months of November and May, every general practitioner sees many children suffering from cold in the head, little or no attention is paid to it. He regards it as a law, that every cold has a tendency to leave some chronic inflammation, which if kept up, will develop some form of rhinitis.

A large part of the catarrhal troubles of adult life, are directly traceable to the carelessness of both parents and physician, who allow colds in the head to pass by untreated in early life of the patient.

The first step, toward curing catarrhal troubles, in the nasal passages is to gain good vigorous health. Constitutional treatment is of great importance, cold baths, short exposure to cold air, frequent frictions and wearing woolen clothing are measures of first importance. Special attention should also be given to the child's feet. The medicinal treatment should require care and thought. Every physician has his own method of managing a cold; during the first stages, the general rule seems to be, to let it alone. So doing, they allow chronic rhinitis to develop. He recommends warm alkaline solutions, and medicines to restore heat and sweating, during the first stages. Bicarbonate of soda and baborate of soda, thirty grains of each, in one pint of hot water, likewise solution of boric acid, are good during first stages. The main thing is to keep the nasal passages clear and prevent the discharge from being retained. For infants, the best way to use a detergent is to pour it into the nostrils, with a teaspoon; the medicament should be warm, mild, and only a few drops used at a time. An atomizer may be used with older children. Parents should be taught to look for, and remove any hard crusts which may form, and if the child is subject to repeated colds, it should have a careful rhinoscopic examination followed by proper treatment.

REPORT OF CASE OF IMPACTED CERUMEN AND ITS RESULTS.

Mr. B., aged 22; Seigel St., Brooklyn, came to my clinic at the Central Throat Hospital and Polyclinic Dispensary of Brooklyn for the treatment of a slight conjunctivitis.

I noticed that the patient was extremely emaciated and pale, seemed very weak and had frequent spells of coughing. Upon inquiry I ascertained that the patient had been under the treatment of various physicians and that almost all had given a diagnosis of "Incipient Tuberculosis." I learned that the patient had daily rise of temperature, night sweats and frequent spells of coughing followed by some expectoration. He had had one slight hæmorrhage and complained of pain in the lower part of thorax.

The patient having noticed me treating several ear cases, remarked that one of his ears troubled him and that he would like to have it examined. I found his hearing for the watch in right ear normal but in left ear only by contact. The tuning fork was heard best in front of right ear, but in the left it was heard only on application to the mastoid. When placed on the teeth or frontal bone the sound was positively referred to the left ear. This, of course, proved that there existed some occlusion of the auditory canal or a disease of the middle ear. Upon introducing an ear speculum I found a dense black mass of impacted cerumen, and it was one of the densest and hardest masses of cerumen I had ever been called upon to extract and I only succeeded after repeated syringing with a Pomeroy syringe and warm water.

After removal of the cerumen I found the tympanum thickened and very red and without the brilliant polish usual to that membrane and no light spot. The patient could now hear the watch at a distance of three inches.

I introduced a small piece of borated cotton in the auricular canal to exclude the cold air, from this, but lately covered drum, and directed the patient to call again. I did not see him again for two weeks, and on his return, I with difficulty recognized him. He said his cough had almost entirely ceased, that he had no more night sweats, no pain in the thorax, slept well, temperature normal and, as he declared, had a most glorious appetite. He

had gained about ten pounds in weight. This most unexpected change in the patient's condition, of course, interested me greatly and as I found that he still expectorated slightly I secured some of the sputa and had it examined for tubercular bacilli. The results of the examination were negative.

I saw the patient four weeks afterward and he had rapidly gained flesh, his cough had entirely ceased and all other general symptoms had disappeared. He said he felt entirely well and was soon to go to work. Upon examination the ear showed an almost healthy drum membrane slightly sunken. The light spot had returned but slightly out of position and diminished in size. Hearing for watch in this ear was good at four feet.

The pressure and irritation of the impacted cerumen upon the tympanum causing reflex cough had evidently given rise to the patient's general symptoms. The incessant coughing caused a laryngitis and bronchitis, and to them were due the rise of temperature and general debility; and the great strain upon the diaphragm and thoracic muscles, accounted for the thoracic pain.

This was in the months of February and March. I saw the patient the last time on the second of July and he appeared in perfect health and weighed about 155 or 160 pounds. When I first saw him he only weighed at the best 105 pounds.

Although these cases are exceedingly rare, there being only one or two on record, yet this one case, showing such a fearful result from such an obscure cause, and one which, as shown in this case, is so readily overlooked, may prove of some interest and value to the general profession. —*Miss. Med. Monthly.*

TREATMENT OF VOMITING OF PREGNANCY.

Routh states that in seven years' practice he has always been able to arrest the vomiting of pregnancy by brushing the cervix and lower cervical canal with a mixture of equal parts of iodine, iodide of potassium, spirits of wine and water.

In general the vomiting ceases immediately after the application. If the vomiting should recur, the cervix should again be brushed. Generally after this the vomiting will be permanently relieved. —*Therap. Gazette.*

Selected Formulæ.

COD LIVER OIL EMULSION.

R	Cod liver oil.....	8 fl. oz.
	Yolks of eggs.....	3.
	Tragacanth in powder.....	16 grains.
	Tincture of benzoin.....	1 fl. dram.
	Spirit of chloroform.....	4 fl. drams.
	Essential oil bitter almond.....	8 minims.
	Water to make.....	16 fl. oz.

Sig.—Rub the tragacanth with a small quantity of the oil, then add the egg, and with constant trituration water and oil alternately and the flavoring ingredients until the emulsion is completed. About two fluid ounces of water will be needed.

—*Br. and Col. Druggist.*

DIPSOMANIA.

Alexander gives the following as a good remedy to enable drunkards to resist the drink crave:

R	Tinct. capsic.....	M x.
	Sodii bromidi.....	gr. x.
	Spirits ammoniac.....	5 l.

Sig.—Give at a dose several times daily.

—*N. Y. Med. Jour.*

ANTISEPTIC POWDER, IMPROVED.

Cheap but reliable substitutes for these expensive proprietary preparations, as well as for iodoform, however, are always in demand. The following formula is used largely in the hospital wards of a city institution in the treatment of chronic ulcers, suppurating sores, and generally as an iodoform substitute:

R	Salol, powdered.....	5j.
	Sulphite of zinc, powdered.....	5iss.
	Benzoin, powdered.....	5ss.
	Purified talcum.....	5ij.
	Oil of fennel.....	M xx.

M. et. sig.

—*American Druggist.*

CHRONIC DIARRHŒA WITH INTESTINAL FERMENTATION.

R	Salol.....	3 parts.
	Castor oil.....	15 "
	Rhubarb.....	30 "
	Gum arabic.....	10 "
	Water.....	120 "

Mix. A tablespoonful every hour till the bowels move.

—*Le Prog. Med.*

GONORRHOËAL ERECTIONS.

R	Camphor.....	3 grammes.
	Opium extract.....	0.5 grammes.

For 30 pills; 4 pills to be taken at night—1 every 15 minutes.

—*Jour. des Mal. Cut. et Syp.*

CHRONIC RHINITIS.

In the remedial treatment, the following has proven of service, used with the

atomizer twice or thrice daily. If used as a douche, dilute with two or three parts water. Note: The iodine is decolorized in preparation, a clear solution of light amber color resulting.

R	Sodii boras.....	¼ drachm.
	Sodii bicarb.....	1 drachm.
	Aque puræ.....	2 ounces.

Dissolve and add

	Acid carbol.....	15 grains.
	Tinct. iodi.....	3 drachms.
	Listerine.....	q. s. 4 ounces.

Mix.

—*Med. Brief.*

The following may be given with benefit to allay the craving for alcohol, and to some extent take its place:

R	Spt. ammon. aromat.....	5il.
	Tinct. cinchona.....	5iss.
	Tinct. capsic.....	5il.

Sig. A large teaspoonful in half a tumblerful of effervescing potash water every hour.

—*Whitla's Dictionary of Treatment.*

ANTISEPTIC MOUTH WASH.

Muller advises:

R	Acid thymic.....	gr. iv.
	Acid benzoic.....	5 il.
	Tinct. eucalypti.....	3 ss.
	Spt. vini rect.....	3 il.
	Ess. menth. pip.....	gtt. x.

Sig.—Drop enough into a glass of water to cause turbidity, and rinse the mouth morning and night.

—*Med. Rec.*

THE PREVENTION OF OPHTHALMIA NEONATORUM.

The New York Legislature passed the following act, to take effect on the first day of September, 1890: Sec. 1. Should any midwife or nurse having charge of an infant in this state notice that one or both eyes of such infant are reddened or inflamed at any time within two weeks after its birth, it shall be the duty of such midwife or nurse having charge of such infant, to report the fact in writing within six hours to the health officer or some equally qualified practitioner of medicine of the city, town or district in which the parents of the child reside. Sec. 2. Any failure to comply with the provisions of this act shall be punished by a fine not exceeding one hundred dollars, or imprisonment not exceeding six months, or both. If the provisions of this act are enforced a very marked reduction of the blind will result.—*Boston Medical and Surgical Journal.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, NOVEMBER 12TH, 1892.

THE PRACTICAL VIEW OF ECTOPIC PREGNANCY.

Theory and practice go hand in hand in the general application of medicine and surgery in the ordinary routine of the physician only so far as is best for the ultimate good of the patient. This is another way of saying that if theory cannot promise better results than tried and therefore applied therapeutics or surgery, these latter are to have the preference, and the problematical remedy is to be left for a less urgent occasion where no life is involved. For the every-day practitioner, and for him especially who is alone, and must rest his case on his own ability to rise equal to any emergency, and where the possibility of so doing depends entirely on his previous experience, reading, and natural bent, the question of speedy resort

to surgical interference in ectopic gestation where the symptoms are urgent, is always a matter for grave consideration. This grave accident in the childbearing woman, may from its incipency be ever on the verge of disastrous rupture, and on the other hand may rupture without accident, and the fœtus die or go on to full term. With these facts before him what is the obstetrician in general practice to do. It is easy enough in a large medical centre like Philadelphia, where a score of men ready to operate are always at hand, to make a speedy resort to surgery, without delay, with a fair chance of saving the patient. It is first imperative to understand what the common symptoms of ectopic gestation are, in order to be on the lookout for it. In the first place it is to be thought of in conception after long sterility; it is to be kept in mind in sudden accident in those who are illegitimately pregnant. It is to be considered as a possible contingency in those women who have a longstanding pelvic inflammation with a more or less extended period of sterility. The pathology of these conditions as related to the condition of pregnancy will not be here discussed. Sudden attacks of pain in pregnancy after or in any of these conditions, ought to be regarded with concern. Examination carefully made, after the occurrence of pain, may reveal the presence of an unnatural swelling in relation with the uterus, and if along with this, there are present symptoms of pregnancy, the patient ought to be dealt with as a suspect, and her condition determined, by careful consultation. This early done will give her the benefit of any doubt, will antedate probably any dangerous period in pelvic inflammatory disease apart from ectopic, and anticipate all complications arising therefrom. This rule will apply in the non-fulminant ruptures of the ectopic sac. In these latter there is no time left in which to seek consultation. The woman is found in collapse, pulseless,

and suffering excruciating pain, or with a history of it.

There is no time left for delay. The delay that falters is the same that kills, and speedy aid must be afforded. To have success in these cases must not be considered certain by the casual operator. We read too often that the cases when operated on are sure of recovery. This means in surgical hands, in clean hands, in expert hands, that can open the abdomen, tie off the bleeding vessels, wash out the masses of clot and debris, without delaying to be clean, or to get clean, or to stop and wonder along the road of operation.

Unless a man can do all this, his patient has about as good a chance of getting well without surgical interference as with it, and this is saying very little.

The surgery that gives success equally in all hands has not yet been discovered. Good result and bad will always be had in every department of the art where the skill is variable. The safeguard of every community, no matter how situated, is to see to it that it has and encourages some man by its support to devote himself sufficiently to such study and investigation as will enable him to rise equal to an emergency of this order with good hope of success. To know the best and speediest way of controlling the hæmorrhage of ectopic gestation is one thing; successfully to accomplish this is another, so far as after-results are concerned.

The main point is, in this as in all other delicate surgery of the abdomen, to know how to be clean. To be clean physically, not to trust to chemicals. The man who is dirty till he is disinfected with sulphur, chlorine and carbolic acid, will be essentially dirty after he is through with all these. Like seeks like, and if he is not by habit clean he will do a dirty operation. In all obstetric and gynecological surgery the road to success lies by the way of clean body, clean clothes, clean

instruments, clean beds, and clean patients and nurses. The man who has not these, and is not all of this, in his ideas and requirements, has only luck if his results are good, and his desserts if they are bad.

A MIGHTY BAD RISK.

He was a man well along in middle age and was willing to be insured. The agent had prepared his "application," and turned him over to the searching scrutiny of the accomplished medical examiner. "I might as well tell you, doctor, to begin with, that ours has been a family of fatalities and sudden death," said the applicant. The examiner looked serious as he replied: "Why, you seem to be in excellent physical condition. What did your father die of?" "Heart disease." "That's bad. How old was he?" "Ninety-two." "Um! And your mother?" "She's gone too. Killed at a crossing." "And her age?" "Mother was a little over 79." "Do you know the age, and cause of your grandfathers' deaths?" continued the examiner. "Yes, indeed. Father's father died just a week after his 90th birthday. They say he used too much tobacco. Mother's father was only 88. Falling down stairs finished him." "And your grandmothers?" "One of 'm had consumption at 86, and died of it in no time. The other was nipped by a sunstroke at 84. Oh! they all went quick." The examiner did not seem so grave as he asked: "Have you any brothers or sisters?" "One sister and two brothers," was the answer. "John went out into the mining country when he was 72, got into trouble there, called a drunken man a liar, and was shot. Henry was drowned at 69, trying to help save two young fellows that couldn't swim. Sister's alive. She's awfully careless; eat a lot of green stuff the day of her golden wedding, then danced in the evening with all the old fellows on the lawn, even after it was raining; took her two days to get over it. She'll go in a hurry like the rest some of these times."

"Well," said the medical gentleman smiling, "Think I'll chance you, and don't believe your application will be 'turned down' at home office. Only you must look out for yourself. Be careful about catching hard colds after you are 80 years old."—*Chicago Post.*

Book Reviews.

A Manual of Medical Jurisprudence and Toxicology, by Henry C. Chapman, M. D., Professor of Institute of Medicine and Medical Jurisprudence, in the Jefferson Medical College, Philadelphia, with thirty-six illustrations. W. B. Saunders, 918 Walnut Street, Philadelphia, Pa. Price \$1.25 net.

It is very necessary that every physician should have some knowledge of Medical Jurisprudence. The physician should know what the commonwealth expects and demands of him in his professional capacity, as well as to know his own rights as a medical expert. The author has written a plain, concise work, setting forth the leading facts, without going into lengthy discussions. We recommend the book to any one desiring more knowledge on Forensic Medicine.

Disease of the Kidney and Bladder, A Text-Book for Students of Medicine, by W. F. McNutt, M. D. etc., Professor of the Principles and Practice of Medicine, University of California. J. B. Lippincott Co., Philadelphia, Pa. Price \$2.50.

This work is based upon a series of lectures delivered in the University of California. The nomenclature of kidney diseases is considerably simplified, especially of the inflammatory varieties.

A commendable feature of the work is the part devoted to the anatomy and physiology of the kidneys. The author very rightly says, a thorough knowledge of the anatomy, physiology and histology of the kidney is indispensable to the proper understanding of the etiology and symptoms of its pathological conditions.

BLACK EYE.

There is nothing to compare with a tincture or a strong infusion of capsicum annuum, mixed with an equal bulk of mucilage or gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil, and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, the treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic, sore or stiff neck.—*Medical Times.*

Correspondence.**QUACKS.**

Editor of MED. AND SURG. REPORTER.

—In the last few months I have quite frequently happened to pass or to wait near an old Indian doctor who stands leaning against one of the stalls in a public market. His clothes are dilapidated and his dark face is shaded by a well worn broad-rimmed, chip hat. The only thing about him that would suggest his vocation is a black leather case, containing a number of small vials and a package of carefully cherished printed sheets, announcing the virtues of his vegetable remedies. Two or three times I have seen some one stop and ask him questions about his medicine, but as yet I have failed to see a sale accomplished.

Within half a mile of this camp-follower of our profession are two or three other doctors, occupying commodious and comfortable buildings, employing a staff of physicians and a corps of clerks and servants to flood the country with literature (pardon the word) announcing to the people at large, that the medical men of that particular institution have, in some manner not very clearly explained, gained a better knowledge of disease and a greater skill in its cure than ordinary physicians and surgeons who have yet to learn the value of a proper combination of paper and printers' ink. The men in charge of these institutions are well-dressed and prosperous; they and their assistants are graduates of medical colleges, and conform to the letter of the laws regulating medical practice. By the laity they are looked upon as desirable citizens, their social status is good and they may even take an active part in church work.

Here are the extreme phases of irregular practice, the one such as to excite our ridicule and pity, the other holding out, with the apparent frankness of methods customary and legitimate in ordinary business, the hope of speedy and certain cure and by a combination of some degree of medical knowledge, of fraudulent generalizations as to its abilities, and a shrewd commercial spirit, this caricature of our profession has established itself too firmly to call forth an expression of mirth. There is a short, crisp word which we could apply with impunity to the Indian

doctor, but it would be a dangerous, perhaps a costly experiment to name by this word any of the better clothed and better housed advertising physicians. Any difference of opinion between the regular medical profession and other bodies of medical men ought to involve no condemnation nor hostility as long as those differences are held in good faith and do not apply to matters of integrity and decency of conduct; but if possible, there should be such a definition of the word *Quack* adopted by the medical profession that that word could be used when occasion requires with fixed meaning and without the risk of legal procedures. A physician's legitimacy depends upon two factors, first that he shall have been properly prepared for his work, secondly that he shall carry on his practice in a becoming manner. In the writer's opinion any one who departs seriously from either of these requisites should be denominated a quack. To be more explicit, the following definition is offered:

1. A quack is a person practicing medicine without having graduated from a genuine medical college (except a medical student practicing for the sake of experience or any one rendering temporary relief as a matter of charity.)

2. A quack is a person, whether regularly graduated or not, who advertises his medical qualifications in public prints, circulars or by any other means except the sign and office card employed in the manner established by custom. This statement should not be construed as offering any objection to a physician's becoming well-known socially or in any non-medical way unless his social, scientific or other pursuits are mere subterfuges to enable him to advertise himself as a doctor.

3. Qui quackit per alium quackit per se.

It is becoming altogether too frequent an occurrence that physicians connect themselves with some advertising institution (no allusion is intended to properly conducted and properly advertised hospitals and sanitariums) expecting ultimately to join the ranks of the regular profession which is quite too lenient with its pardon for these who are ready to abandon their aims against medical ethics and be received into the membership of a county society. Without exceptionally favorable opportunities, it requires considerable hardship and self-denial for a man to establish him-

self as a physician and it is by no means encouraging to one striving to be decent and "ethical" in the midst of such trials to see some one else take the easy but disreputable road around the difficulties of the first few years of medical practice and reach the same goal toward which he is himself struggling. Better failure than such success, for of the fifteen or twenty per cent. of medical graduates who abandon practice, more do so from lack of persistence or on account of better inducements in other fields of labor than from lack of ability.

I have known men to teach school, operate telegraph instruments, sell books, represent wholesale pharmacists, work in drugstores, manage Turkish baths, practice stenography, cut hair, sell tin-ware, wait at hotel tables, because they were not in circumstances to begin the practice of medicine for which they were prepared. For all these men I have had a wholesome respect. On the other hand, men better qualified intellectually than the majority of those referred to, men who previously supported themselves in other ways, have deliberately gone into advertising medical institutions, either with the intention of following such a life or as a make-shift till an opportunity for embarking in regular practice should present itself. A physician,* speaking with reference to the ingratitude of these men to their alma mater compared them to "foul birds which soil the nest in which they have been reared."

The writer has no personal motive in pronouncing an invective against this particular form of irregular practice nor does he consider it as a graver evil than those species of quackery whose symptoms are more striking. He simply wishes to call attention to it as an evil which has insidiously fastened itself upon the medical profession and of whose importance few are cognizant.

A. L. BENEDICT, A. M., M. D.
Buffalo, N. Y.

COCODYNIA.

Whitla recommends the following suppository employed at bed-time:

R	Ext. belladonnae.....	gr. 4.
	Ext. hyoscyami.....	ss. gr. 4.
	Iodoform.....	gr. 21.

Ol. theobromae.....
—Med. News.

*Prof. Chas. G. Stockton of the University of Buffalo.

Periscope.

THERAPEUTICS.

THE TREATMENT OF SKIN DISEASES.

At the meeting of the American Dermatological Association, recently held in New London, Conn., Dr. Condict W. Cutler, of this city, read a very interesting paper on the treatment of certain skin diseases by the use of an irritant application composed of iodine, carbolic acid and chloral, in equal parts. He stated that perhaps in no branch of medicine has greater advancement been made than in dermatology, so far as the pathology and diagnosis are concerned, but that in the treatment of skin diseases, especially in the chronic forms, very little improvement is found. The trouble is that we are too apt to use bland and soothing applications, and the remark once made by a distinguished dermatologist that the "basis of all treatment of skin diseases is grease" still is true.

A slight, stinging pain is first produced, which is soon followed by a decided numbness of the skin over which the solution is painted. This solution possesses strong antiseptic, antiparasitic, antipruritic, antiphlogistic, analgistic, anæsthetic and absorption properties. It penetrates deeply into the tissues of the skin not only hastening the absorption of inflammatory products but being itself readily absorbed.

The chief therapeutical advantages of the mixture are due to its penetrating action into the tissues, its rapid destruction of all forms of micro-organisms, and its wonderful power in hastening the absorption of inflammatory products. He considers it especially serviceable in parasitic skin affections and in all forms of chronic skin diseases characterized by thickening and induration of the skin, accompanied by scaling and itching.—*Ex.*

DENTAL USES OF THYMOL.

In the *Deutsche Monatsschrift für Zahnheilkunde*, January and April issues for 1892, A. J. Hartmann calls attention to the value of thymol as a medicament in the treatment of acute pulpitis, claiming for it an antiseptic and germicidal action which is sufficient to arrest the inflammatory process resulting from microbial infection without exerting any escharotic effect upon

the pulp-tissue. He cites cases of pulpitis with exposure successfully treated by thymol in substance, and recommends it as decidedly superior to carbolic acid as a preliminary treatment to the capping operation, which he asserts may be successfully performed after a sufficient treatment with thymol.

A limited series of experiments made with this drug fully substantiate the claims which Hartmann makes for it. The application may be made either by applying a small crystal or a powder of the pure drug directly to the pulp, and sealing it in under a suitable temporary stopping. A saturated solution of thymol in chloroform may be used on cotton, or the drug may be melted in a small capsule of metal or porcelain, and a pellet of cotton or small disk of blotting-paper dipped into the fluid thymol and applied. The drug possesses the peculiar property of remaining fluid long after its temperature has fallen below its fusing-point, which gives ample time to apply it to the pulp-exposure before solidification takes place. In every instance so far as tried, relief of pain instantly follows the application. In deep-seated caries with great sensitiveness of dentine where it is proposed to temporarily fill with gutta-percha, very satisfactory results have followed from touching the warmed and plastic gutta-percha to the surface of a thymol crystal, which slightly softens the surface of the gutta-percha by its solvent action, renders it adhesive as does chloroform or cajuput, and when inserted exerts an antiseptic and obtundent effect upon the dentine. Its use in this way suggests the possibility of its value as a component part of the gutta-percha temporary stopping material in the preliminary treatment of cavities with sensitive dentine.—Edward C. Kirk, in *Dental Cosmos*.

ALCOHOLISM AND ITS TREATMENT BY STRYCHNINE.

In a pamphlet recently published in Tena, G. Beldan discusses all the papers, hitherto published in Russia and France, on strychnine treatment of alcoholism. Of peculiar interest and importance are the animal experiments performed by S. W. Jaroschewski, which demonstrate that in dogs strychnine possesses the property of neutralizing the inebriating action of alcohol, and that dogs that are given

strychnine and alcohol at the same time, are under incomparably better vital conditions than dogs taking alcohol alone. The latter died spontaneously, without an exception, while the former (excepting one who died from strychnine poisoning) continued living.

The result of experiences in man is the following:

1. Strychnine is a physiologic antagonist of alcohol, and treatment of alcoholism by nitrate of strychnine gives more or less favorable results.

2. The best results are obtained in dipsomaniacs, less good results in chronic drinkers.

3. The higher the doses, and the longer the treatment is continued, the more satisfactory is the result. Luton administered grm. 0.005 subcutaneously, or grm. 0.03 internally, 3 times daily; Korona, grm. 0.005-0.01 once daily, and noticed gradual disappearance of the longing for alcohol after a few injections.

4. Alcoholics support disproportionately large doses of strychnine without secondary phenomena, without accumulative effects.

5. It appears that strychnine has the property of eliminating the craving for alcohol in the potatory.

The author engaged in experiments in the clinic of Tena abstains for the present from an expression of his own views on the value of the remedy, promising some early communications on the subject. — *Can. Lancet*.

SURGERY.

THE DIAGNOSIS OF HEAD INJURY FROM DRUNKENNESS.

Dr. L. L. von Wedeking writing to the *Lancet* on this subject, makes the following interesting statement:

A cell, or even a police station, is not a good place to form a correct diagnosis, and the frequency with which one finds symptoms very much obscured by alcohol is well known to police surgeons. A method which I employed while engaged in a very active emergency service in New York City, and which to-day is in extensive use in this class of cases, answers every purpose desired, and is more easy of application and devoid of the danger attendant upon the inhalation of ammonia. By pressure upon the supraorbital notches, compressing the nerve, a diagnosis of al-

coholism may with absolute certainty be made in a few seconds, thus differentiating on the spot between coma due to alcoholism, injury or disease. Where no result is obtained, one may, with almost positive certainty, look for some other cause of coma. In no case have I failed with this method, and so certain became I of its infallibility that, without waiting to further examine for head injury where no result was obtained, I took the patient to the hospital sure of a "case." A case of alcoholism pure and simple will, upon the application of this pressure, immediately show very evident signs of life, and, be the coma ever so deep, the effect of the alcohol will for a short time be sufficiently removed to permit a thorough and rapid examination. The absence of result from this method should at once cause great suspicion of some cerebral trouble due to injury or disease. I would add, that to quiet hysterical convulsions, in hiccough, in alcoholic mania and for the detection of malingersers, there is, to my mind, nothing superior.

HOW TO POULTICE THE EAR.

Poulticing an ear may seem to be a simple operation, but there is nevertheless a right and a wrong way of doing it, and it appears that the wrong way is the one usually adopted. At least, so says Dr. Alfred H. Buck, of New York, in an article on aural therapeutics in the March number of the new *International Medical Magazine*. Dr. Buck says that while heat is one of the best remedies in painful inflammations of the middle ear, and the poultice is one of the best methods of applying heat, as usually put on the poultice has little effect. What should be done, he says, is first to fill the external auditory canal with lukewarm water, the head resting on the unaffected side upon the pillow. Then a large flaxseed poultice is applied over the ear as hot as it can be borne. The column of water is thus kept warm and acts as a conductor of heat between the poultice and the inflamed surface.

EVILS OF CATGUT.

Some interesting experiments have been made by Kleim (Bull. Gen. de Therapeut.), in which was demonstrated from an aseptic standpoint the superiority of silk over catgut for suturing wounds. When

catgut is employed in surgery, suppuration occurs in spite of all precaution. This led Klemm to suppose that the catgut, itself sterile, afforded a favorable culture medium for the development of such germs as get into a wound during an operation. To ascertain the correctness of his views, he made a number of comparative experiments on cats and rabbits with silk and catgut, with results as above indicated. The gut, after being used, and then placed upon a gelatine culture medium, developed as many as 2,500 colonies, while silk, similarly treated, showed only seventy-five. He, therefore, concludes that catgut, notwithstanding the thorough method of sterilization, as employed by such men as Riverdin and Brunner, is unfit for employment in surgery.

MEDICINE.

TREATMENT OF VOMITING.

Dr. H. B. Lowry says (*Kansas City Med. Index*) that for vomiting, arising from various causes, but especially that of gastritis, pregnancy and phthisis, the remedy par excellence, the action of which, when all others have failed, is indeed most gratifying, is tincture of iodine, ten drops to be taken in water, in divided doses after meals. In the graver lesions of the stomach, such as dilatation, gastric ulcer, cancer, etc., there is much minutia in the treatment, as regards diet, drugs, their methods of administration, and the position the patient should assume under certain conditions, to which the conscientious practitioner must give due diligence. He also calls attention to the discussion that has been going on of late in regard to internal antiseptics, the opinion of the German physicians being that it is very doubtful whether antiseptics given by the mouth ever reach the intestine; they are probably absorbed in the stomach; however, calomel given with this view, where the trouble was not serious, has been thought to be beneficial. In several severe cases of dysentery in a London hospital, after utter failure with the use of opium, lead, ipecacuanha and bismuth, there was tried an enema of alum—half an ounce to the pint of water, twice daily, and in each instance complete recovery resulted. In one instance the disease had been of many years standing, but the result was equally gratifying.

THE DISEASES AND ACCIDENTS OF GREAT CROWDS.

The medical history of the great Columbian celebration, which produced so much enthusiasm in this city last week, deserves some attention, and if it could be completely written would prove most interesting. There were probably four hundred thousand or five hundred thousand visitors during the week and perhaps a quarter of a million persons crowded the streets along which the parades were held. It is estimated that two hundred persons were more or less hurt or taken ill. The census as gathered by newspaper reporters from the police reports and hospitals makes the number about one hundred. Our readers will be interested in the list, as showing the accidents and diseases of great crowds. It is as follows:

Fainting, 35; hysterical seizures, 3; epileptic fits, 11; sprains, 3; run over, 3; fractures, 10—1 of the arm, 2 of the skull, 7 of the legs; falls, 11; cramps, 1; dislocation, 1; burned, mortally, 1; struck by a brick, 1; "taken sick," 13. Total, 94.

This shows that fainting is the most frequent pathological phenomenon, that crowds are bad for epileptics, that falls and fractures are numerous, and that delicate people are liable to be "taken sick." On the whole, the record is not a bad one, considering the enormous congregation of people. The reports also show that the sick and injured were promptly and efficiently cared for and our much abused ambulance service evidently did yeoman's duty on the occasion.—*N. Y. Med. Rec.*

NEURALGIA OF THE TOE.

A neuralgic pain, more or less severe, at the base of the fourth toe is not uncommon, but has attracted medical attention only within recent years. Dr. Morton of Philadelphia, in 1876, was the first to describe it, and to report a number of cases. He had himself suffered a great deal from it.

The attacks always come on suddenly. He was often obliged to remove his boot, sometimes when walking in the street, sometimes when riding in his carriage, and sometimes even when in company. When on horseback he has been compelled to dismount, tie his horse to a tree, and lie on the grass, unable to proceed further.

He found the affection much more fre-

quent in women than in men—a result, no doubt, of the greater delicacy of women's feet and of their wearing tight shoes.

Dr. Bradford, to whose paper on the subject, read before the Suffolk Medical Society, we are indebted for our facts, says that his own investigations in respect to this ailment accord exactly with those of Dr. Morton; that the symptoms were the same, and the proportion of male and female patients about the same.

One of Dr. Bradford's case was that of a young lady obliged to stand all day. She was in excellent health, but for years had suffered from pain in her right foot, radiating from the base of the fourth toe. Her shoes were made with great care, but she suffered all the time, and sometimes the pain was so intolerable that she would willingly have submitted to a surgical operation for relief. She was relieved by treatment and properly constructed shoes.

The following is, in brief, an explanation of this metatarsal neuralgia," or "Morton's affection of the foot." The base of the fifth, or little toe is in a line with the neck of the fourth toe's corresponding joint, and by becoming pressed against the nerves of the latter, it irritates and inflames them.

The pain which results is sometimes only of a dull character, but sometimes is severe and throbbing, and may extend above the ankle. As in other neuralgic pains, there is no inflammation to be seen nor any swelling.

In most cases protracted rest and the use of quite broad-soled shoes will effect a cure; but sometimes the excision of the head of the fourth metatarsal bone is necessary.—*American Analyst*.

TREATMENT OF DIPHTHERIA WITH ARSENITE OF COPPER.

Success in the treatment of diarrhoea and dysentery with arsenite of copper, at first recommended by Dr. Aulsebrook, of Philadelphia, suggested the idea of its use in diphtheria, on the ground that it was the alimentary system that was involved in both cases. The first of October, 1891, an epidemic of modern severity made its appearance in this city, and lasted for several months. My cases, varying in age from one to ten years, were put upon the arsenite treatment; which was supplemented by small doses of calomel when it

was needed on account of constipation. Inunction with sulphate of quinine suspended in glycerin was practised in all cases, usually repeated every four hours. How much quinine was absorbed I do not know, but the plan keeps the skin in good condition. Where there was much cough or hoarseness, equal parts of glycerin and any good wine were given with the arsenite, or, if that was not agreeable, one per cent. of benzoic acid, combined with powdered sugar, was dropped on the tongue and repeated as often as thought necessary. No local applications were made; the surroundings were looked after; and when (as happened in some of the cases) little food could be taken, an effort was made to induce them to take water freely, either plain or in the form of lemonade. None of these cases were malignant, none died, and none suffered from unpleasant sequelæ. Such a short experience in the treatment of such a disease ought not to count for much, but I feel certain that the plan will prove (to say the least) as successful as any, while its application will be more agreeable to all concerned.—*Indiana Medical Journal*.

OBSTETRICS.

THE PROPER METHOD OF APPLYING OBSTETRIC FORCEPS.

Dr. Henry D. Fry urges, as the only rational method, the application of the forceps to the sides of the head of the child without reference to its position in the pelvis. He refers to a former paper in which it was stated that fifty-one per cent. applied the blades in transverse diameter of the mother's pelvis without reference to the position of the head, and eleven per cent. observed no rule and followed either method. He admits that had the great body of the profession been consulted, the majority would be found to apply the forceps according to the German method, and also that in some cases it may be and is impossible to do otherwise. Certainly the difficulties of application are increased when the first method is chosen, and it would be better for a beginner to resort to the second until some facility is acquired. In France the practice to apply the forceps to the sides of the head even when transverse at the brim, and the ideal method of extraction is to apply the instruments in such a manner that during traction the

fetal head is free to execute all the movements that would occur were the labor normal. To accomplish this it is necessary: (1) To grasp the sides of the head with the blades. (2) To make traction in the axis of the pelvic canal. (4) To secure mobility of the head during its passage, by the use of Turner forceps. The Hodge style of forceps should not be used when their application is made without reference to the child's head, and the Simpson style (Elliot) should not be used when their application is to be made to the side of the head. Dr. Fry's conclusions are: (1) Anæsthetize the patient and place her in proper position—buttocks well over the edge of the bed, and each limb supported by an assistant. (2) Ascertain the position of the head, introducing within the vagina two or three fingers, or if necessary, the whole hand. (3) Apply the blades of a Hodge type of forceps to the sides of the head, with the concave edge directed toward the occiput. If for any reason this cannot be accomplished, withdraw the instrument and substitute a Simpson (or Elliot) passing the blades to the side of the pelvis. While making traction with this method, watch for anterior rotation of the occiput, and encourage it in some cases by re-applying the blades to better advantage. (3) Make every effort to secure antiseptic condition during the operation. The fingers, hands and forearms of the operator, the external genitalia and vagina of the patient, the instruments and the hands of the assistants, should be clean and aseptic.—*Am. Jour. Obst.*

TREATMENT OF METRORRHAGIA.

In certain cases of obstinate metrorrhagia, ergotin, extractum hydrastis Canadensis, ice, and applications of tampons are alike incapable of arresting the hemorrhage. In such cases a hypodermic injection of sulphate of atropine has been recently recommended. It is given in doses of $\frac{1}{16}$ grain twice daily. In one case in which the hemorrhage had existed for a fortnight, it was completely arrested after a fourth injection. In a second, when the patient was in a state of collapse, the first injection was followed by a return of the normal temperature and increase of the pulse-rate; after the second the hemorrhage was diminished in a striking

degree; after the third it entirely ceased. A moderate dilatation of the pupils was the only secondary effect observed.—*The Provincial Journal.*

HYGIENE.

SIMPLE TESTS FOR IMPURITIES IN WATER.

The following methods of determining the presence of impurities in water are given by Walling: 1. For organic matter put a little of the sample into a beaker, add two or three drops of dilute sulphuric acid and color distinctly with a solution of permanganate of potassium. If much organic matter is present the color of permanganate becomes discharged almost immediately; if less or very little, it takes longer to decolorize. If the color has not changed in twenty-five or thirty minutes it is safe to assume that organic matter was not present. This is a tolerably reliable test. 2. For nitrites, a little sulphuric acid added to the water forms nitrous acid if nitrites are present, which is easily detected by its power of liberating iodine from iodide of potassium. A little starch paste is mixed with a small quantity of a solution of potassium iodide, and the mixture added to the suspected water containing the sulphuric acid. If nitrites are present the nitrous acid formed liberates the iodine from the iodide, which turns blue with starch. This indirect method is a ready means for detecting the nitrites if present in not too small a quantity. 3. Nitrates are detected by converting into nitric acid, which turns morphine red. A portion of water is evaporated to dryness, the residue treated with a drop of strong sulphuric acid (which makes nitric acid of the nitrate) and a portion of morphine added. If nitrate is present the morphine gives red color. 4. For ammonia, Nessler's reagent is by far the best test. It may be made by dissolving eighteen grains of oxide of potassium in a little water, adding solution of mercuric chloride until the red iodide of mercury first formed redissolves upon agitation. To this is added a solution of fifty grains caustic potassa and distilled water to make eight ounces. This reagent will detect 0.00375 of a grain in a pint of water by giving a yellow color. A

reddish color or precipitate forms with larger quantities of ammonia. 5. Albuminoid matter requires a more elaborated proceeding for its detection. If all of the above were found it is hardly necessary to go to the trouble of looking for albuminoids; the water would be unwholesome even if they were not present.—*Pharmaceutical Era*.

HOW LONG SHOULD A DIPHTHERIA CASE BE ISOLATED.

This most important question is discussed by Dr. Prince, in the *Boston Medical and Surgical Journal*: It is a matter of vital importance, for Dr. Prince tells us of a case wherein the patient, supposed to be well, made visit to relations in Boston nine days from the date of his "getting up." One week after his arrival, a child in the family was attacked with diphtheria and died. An out-break of diphtheria, in a hotel at Nantucket, followed the arrival of a person just recovering from diphtheria, and pronounced well by the attending physician. One of these cases, when supposed to be well carried it to a hotel in town. Three cases of diphtheria in one family, closely followed the advent of a nurse who had just come from attendance on a fatal case.

Dr. Prince thinks that evidence goes to show that poison is retained in the mucous membrane longer than is generally considered to be the case. In lieu of definite knowledge he has adopted the arbitrary rule of advising quarantine precautions for one week after the patient appears to be perfectly free from disease. This seems to be a fairly safe rule and one that is desirable.—*Annals of Hygiene*.

NEWS AND MISCELLANY.

SOCIETY MEETINGS.

At the second annual meeting of the American Electro-Therapeutic Association, held in New York, October 4th, 5th, and 6th, the following officers were elected for the ensuing year: President Dr. Augustus H. Goëlet, of New York. Vice-Presidents Dr. William F. Hutchinson, of Providence, Rhode Island; Dr. W. J. Herdman, of Ann Arbor, Michigan. Sec.

retary Dr. M. A. Cleaves, of New York. Treasurer Dr. R. J. Nunn, of Savannah, Georgia. Executive Committee: Dr. W. J. Morton, of New York, Dr. Robert Newman, of New York, Dr. G. Betton Massey, of Philadelphia, Dr. Chas. R. Dickson, of Toronto, Canada, Dr. J. H. Kellogg, of Battle Creek, Michigan. The next meeting is to be held September 12th, 13th, and 14th, 1893.

AN EXPLANATION.

A quack doctor stood on his wagon at the street corner selling his cure-all. A group of people gathered about him and he undertook to explain to them the anatomy of the throat. "My dear friends," he began) "perhaps you don't know it, but there are two passages that go from the back of the mouth to the stomach. One is called œsophagus and the other œsophagi. Now, the solid victuals go down the œsophagus and the liquids down œsophagi. Over the top of the holes is a cover with a hinge in the middle, and when you swallow beefsteak the little door over the œsophagus flies open, and the little door over the œsophagi drops down, and *vice versa* when you take a drink of coffee." This description proved too much for a farmer who stood on the edge of the crowd. Shaking with laughter; he remarked in a loud tone: "Gosh, but those doors must go flipper flopper when a fellow eats bread and milk."—*Youth's Companion*.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM OCTOBER 30, 1892, TO NOVEMBER 5, 1892.

The leave of absence granted Captain Henry P. Birmingham, Assistant Surgeon, U. S. Army, is hereby extended one month.

PROMOTION.—First Lieutenant Nathan S. Jarvis, Assistant Surgeon, U. S. Army, to be Assistant Surgeon, with rank of Captain, October 14, 1892, after five years service, in accordance with Act of June 23, 1874.

First Lieutenant Harlan E. McVay, Assistant Surgeon, U. S. Army, will proceed from Fort Wingate, New Mexico, to the camp south of Blabee, A. T. and report to Lieutenant Colonel J. W. Barlow, corps of engineers, Commissioner of International Boundary line survey, for duty, relieving Captain E. A. Mearns, Assistant Surgeon, U. S. Army.